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FIG. 1

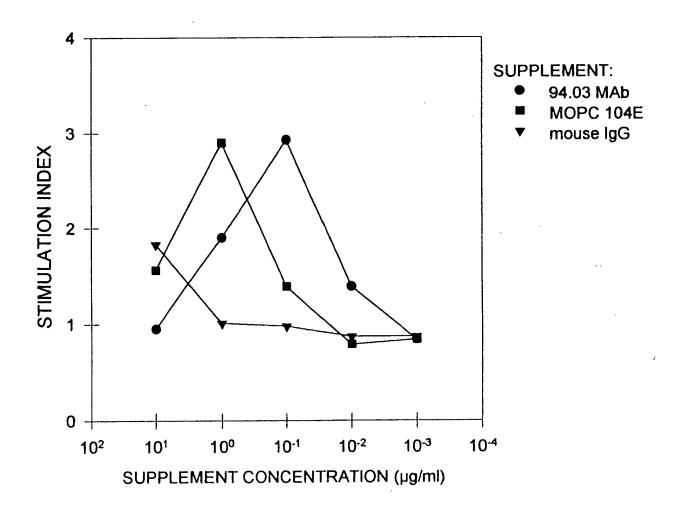
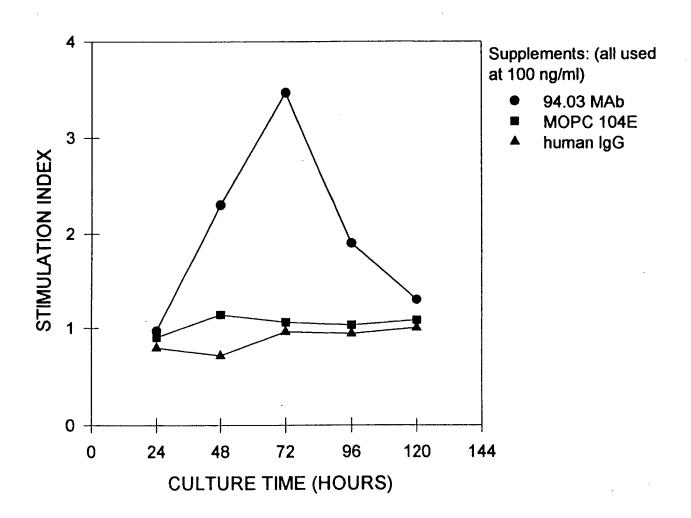




FIG. 2



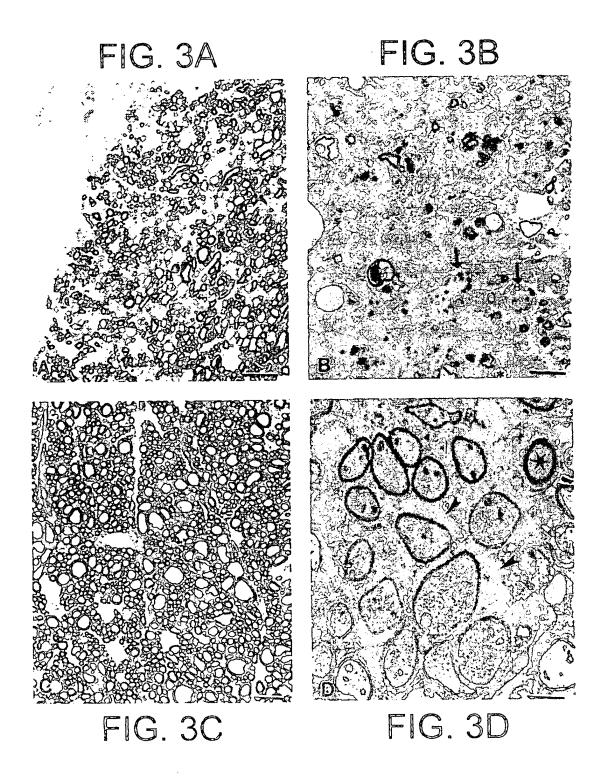
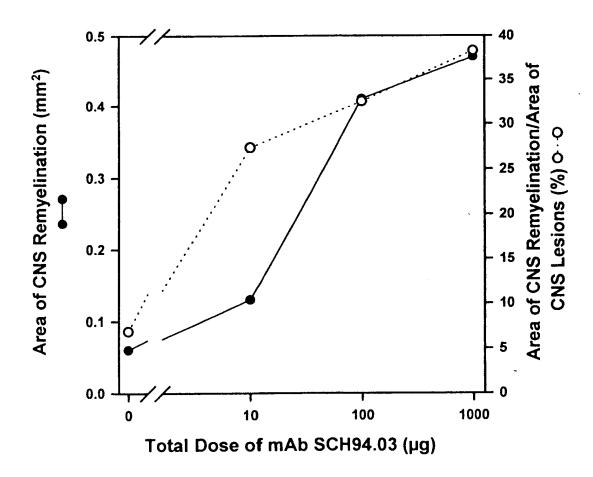
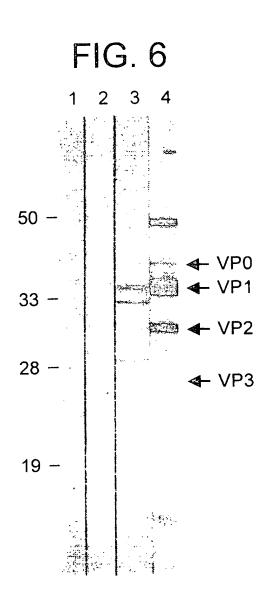
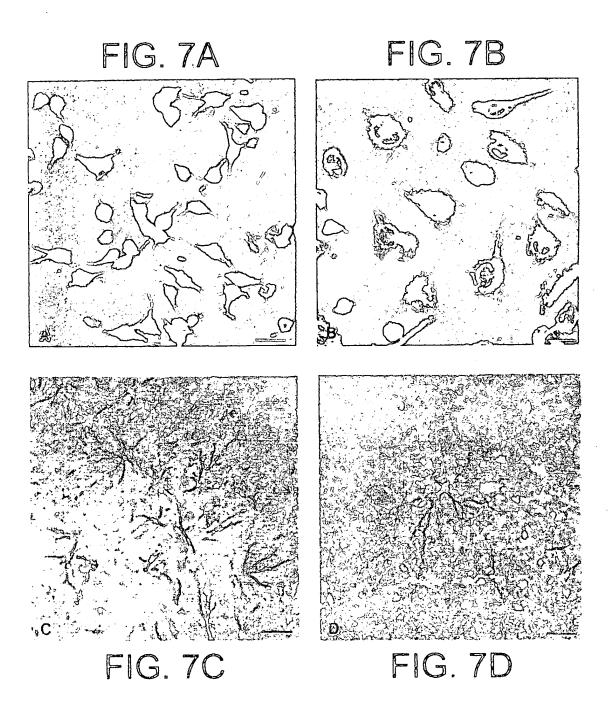




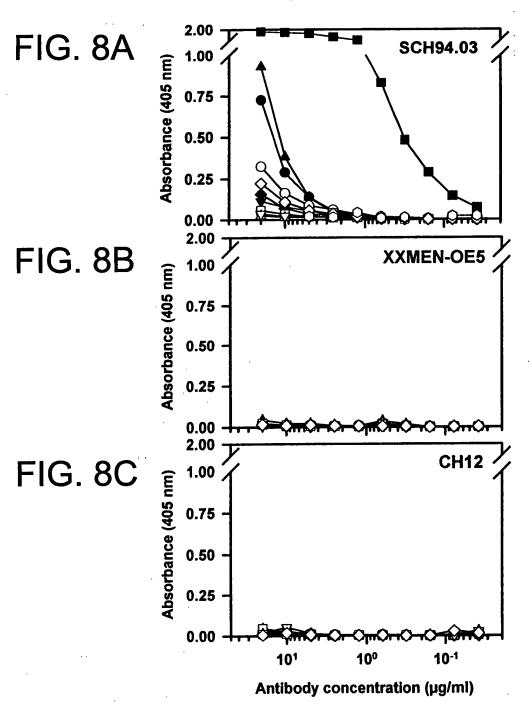
FIG. 5







Protein antigen ELISA with SCH94.03



Antigen:

KLH
 Spectrin
 Hemoglobin
 Vimentin
 A actin
 Iysozyme
 transferrin
 myosin

thyroglobulin

tubulin



FIG. 9

ELISA with SCH94.03 F(ab₂)' fragments









1.25

Bovine thyroglobulin

Antigen:

- Human spectrin Bovine tubulin
- Bovine myelin basic protein
 - □ ◁
- - **Frinitrophenyl (TNP)-BSA** Bovine myosin Dog myoglobin

Absorbance (405 nm)

Rabbit actin Mouse hemoglobin

0.0 SCH94.03 F(ab₂)' Conc. (µg/ml) 10.00 100.00

0.00



Chemical hapten ELISA with SCH94.03

FIG. 10A

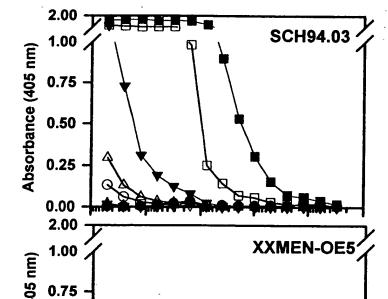
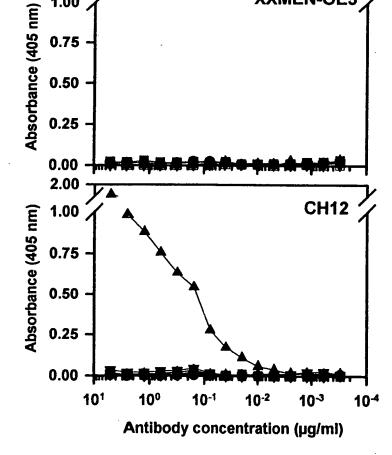


FIG. 10B





Hapten:

- none
- FL
 - TMA PhOx
- Ars
- △ TNP
 ▽ PC

SCH94.03 16.11A Immunoglobulin Light Chain Variable Region Sequence of



3. 11B		Immunoglobulin	og1	Qo.	uli -	ri.	Неаvу	VV.	υ	aj. Bade	hain Var Leader region	arj	. Variable region	le	Reg	Region		equ	Sequence of	0	П С	CHS	SCH94.03	33	
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SCH94.03 CH12 germline V23	CCT GGA CAA GGC CTT GAG TGG ALT GGA AAT ATT AAT CCT AGC AAT GGT GGT ACT AAC TAC	g : :
	CDR2	
SCH94.03	ACA CTG ACT GTA GAC AAA TCC TCC AGC ACA GCC TAC ATG CAG CTC AGC AGC	
germline V23		
	CDR3	
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SCH94.03	TAT TGT GCA AGA CGG GCC CC I TAC TAC GGT AGT AGG AAC TIT GAC TAC TGG S W G X X	ည
CH12 germline V23	TGG GGG TAC T	
	J region Cp	
	110	
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CH12 germline J _H 2		



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	CAG		S AGC		AAG	ACT		>	GTC
	V GTT		ACA I		ACT	22 10 110		H	ACG
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germline JH3 A2B5

FIG. 14

Leader Peptide



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maline Vx41	M ATG	GAC	M ATG	R AGG	A GCT	P CCT	GCA GCA	୍ଷ	ATT	F	0 0 0 0	F TTC	110	1 176	1 CH2	L TTG 1	±E;	0 Y	4 GGT /	T ACC A	R AGA T	0 H	+1 D I GAC A7	ATC C	Q M CAG ATG	A ACC	CAG	Ö i
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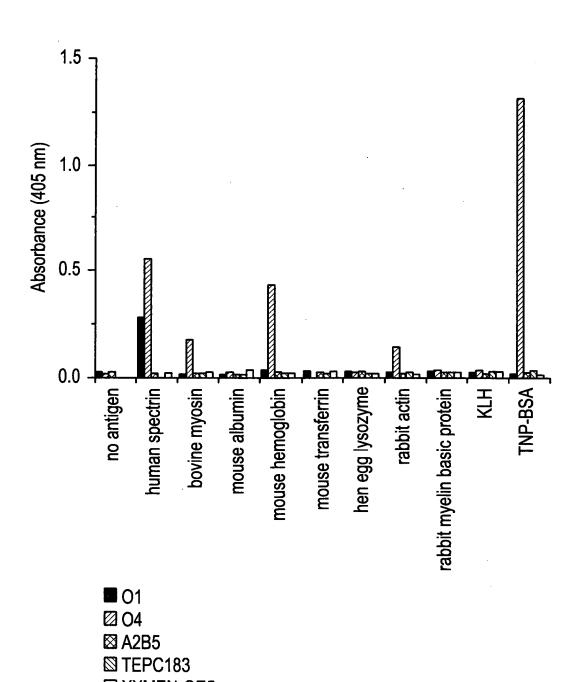


Leader Peptide

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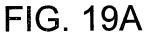


FIG. 18



☐ XXMEN-OE5





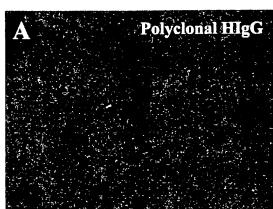


FIG. 19B

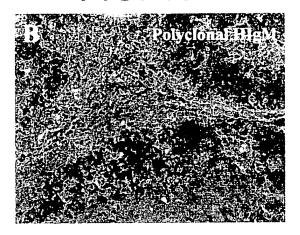


FIG. 19C

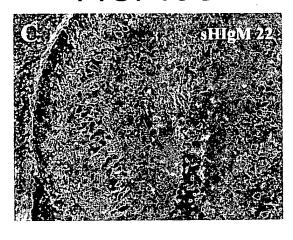


FIG. 19D

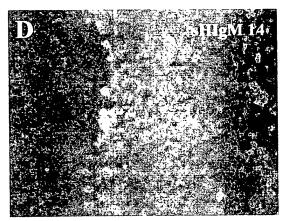


FIG. 19E

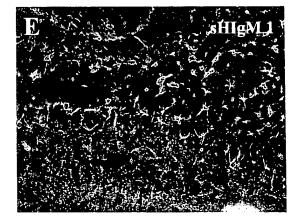


FIG. 19F







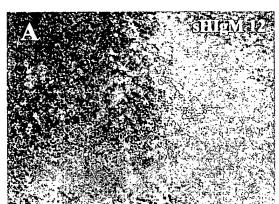


FIG. 20B

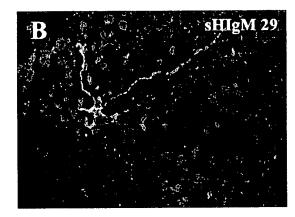


FIG. 20C

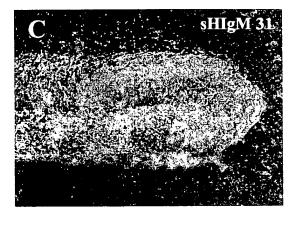


FIG. 20D

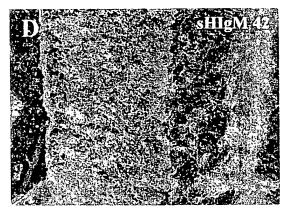


FIG. 20E

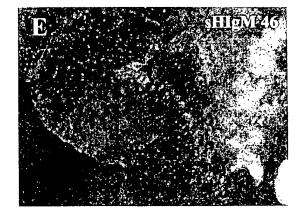


FIG. 20F







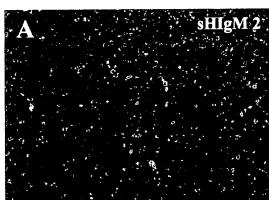


FIG. 21B

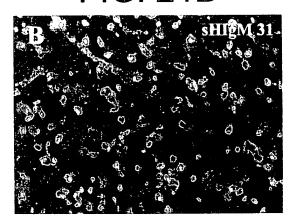


FIG. 21C

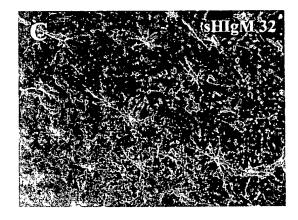


FIG. 21D

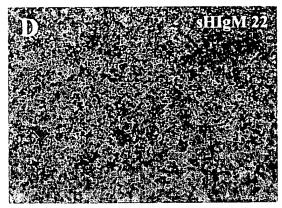


FIG. 21E







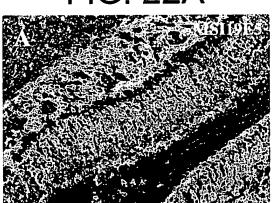


FIG. 22B

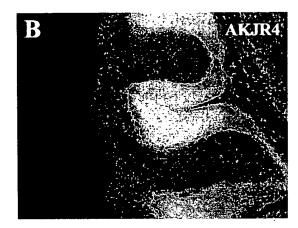


FIG. 22C

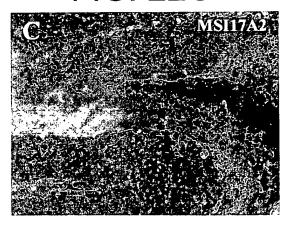


FIG. 22D

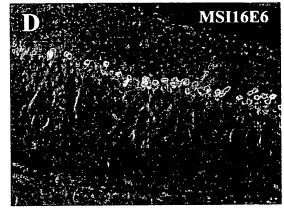


FIG. 22E

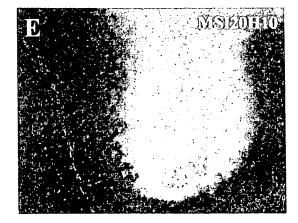
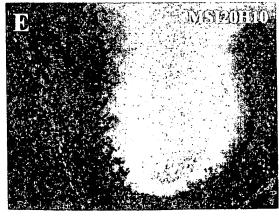


FIG. 22F







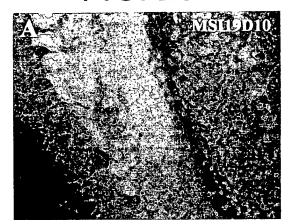


FIG. 23B

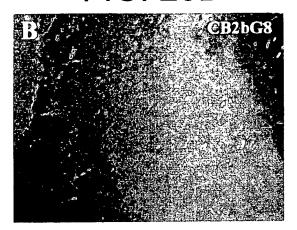


FIG. 23C

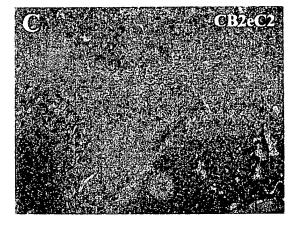


FIG. 23D

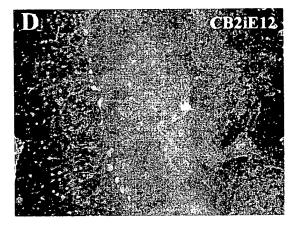


FIG. 23E

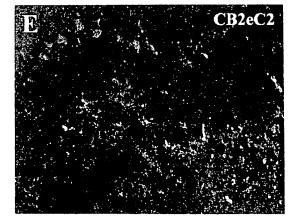
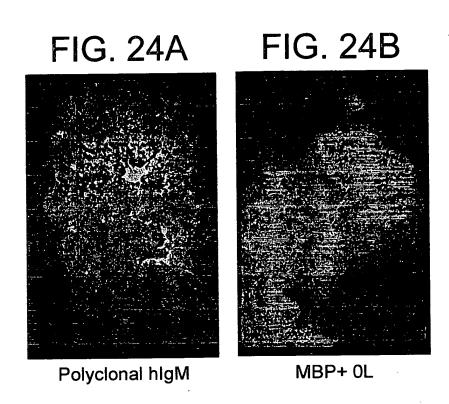
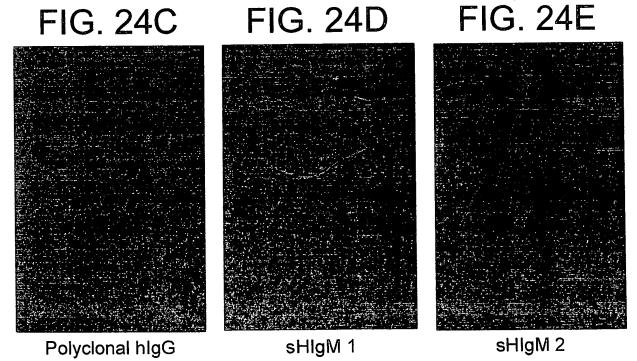


FIG. 23F













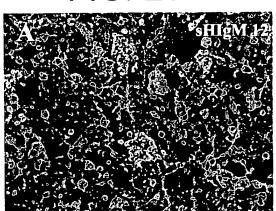


FIG. 25B

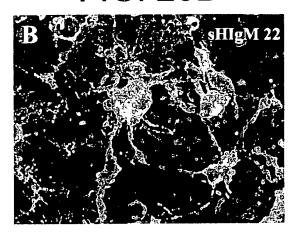


FIG. 25C

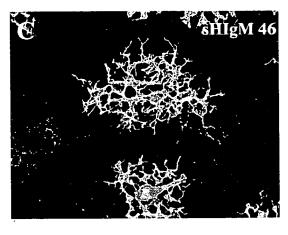


FIG. 25D

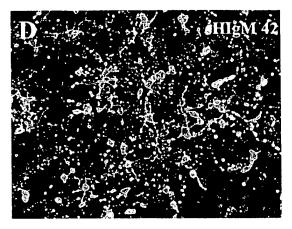


FIG. 25E

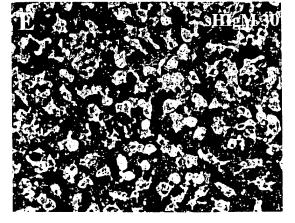


FIG. 25F







FIG. 20A

FIG. 26B

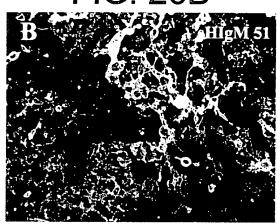


FIG. 26C

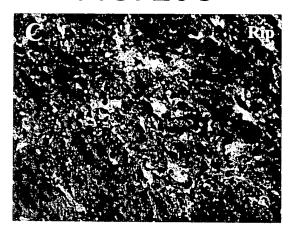


FIG. 26D

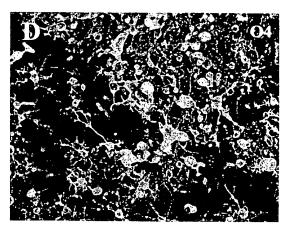


FIG. 26E

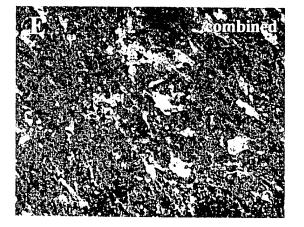
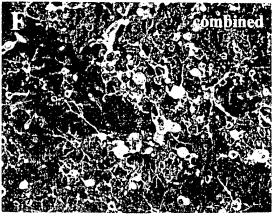
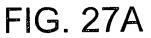


FIG. 26F





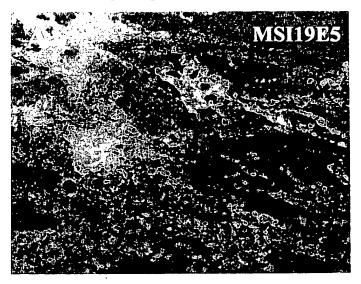


FIG. 27B

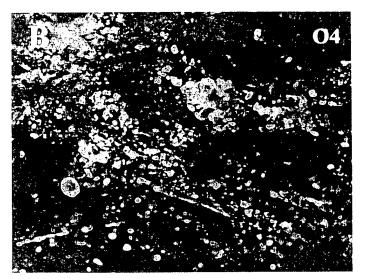
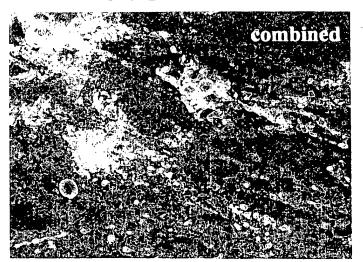
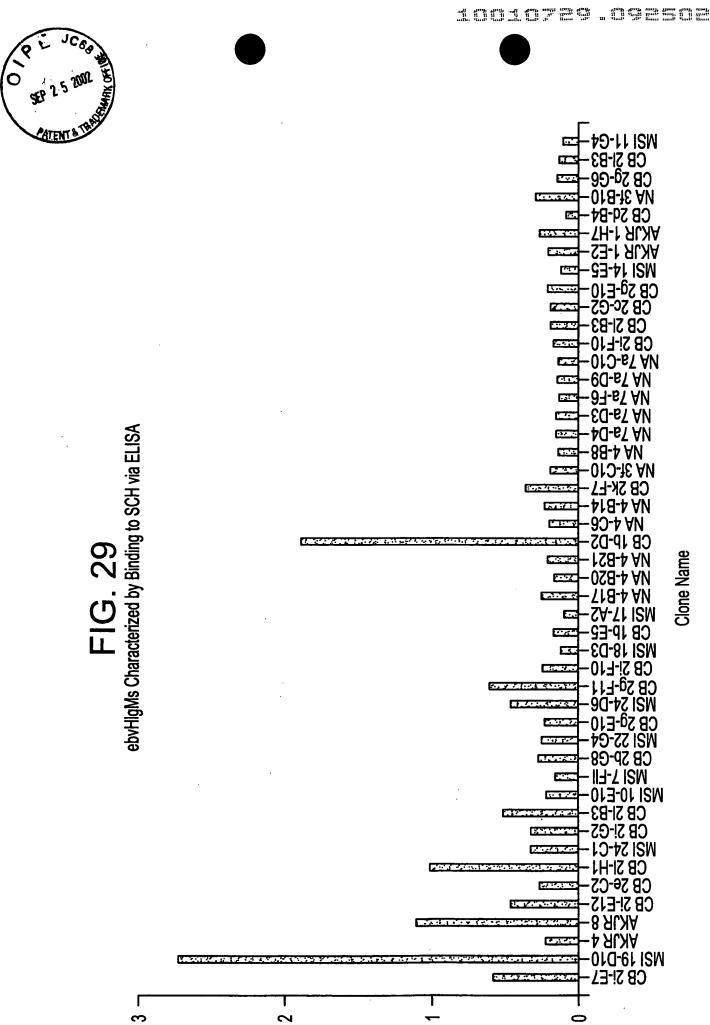


FIG. 27C





(mn cu+) .u.U



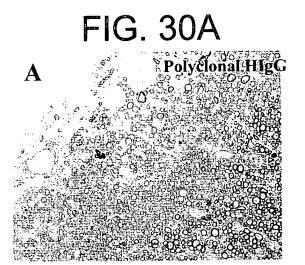


FIG. 30B

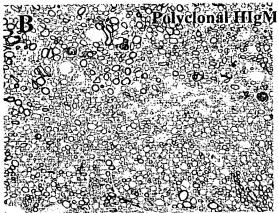


FIG. 30C

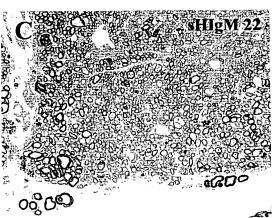


FIG. 30D

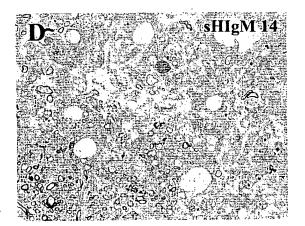
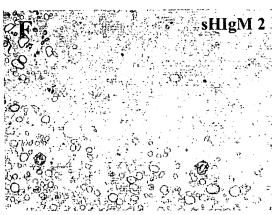


FIG. 30E



FIG. 30F







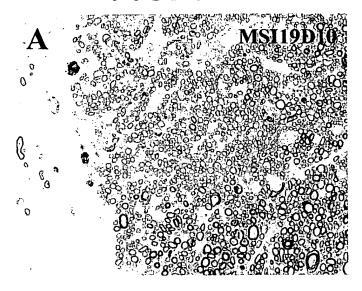
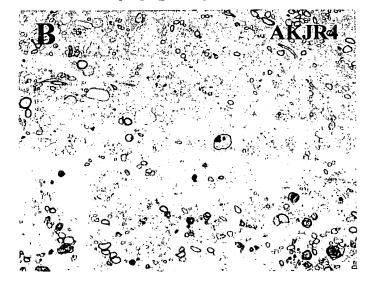


FIG. 31B







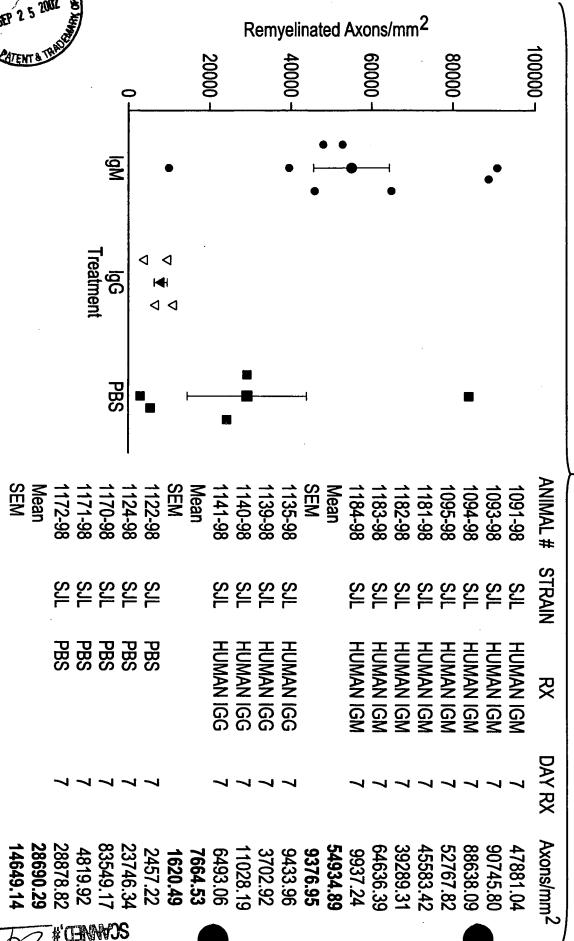
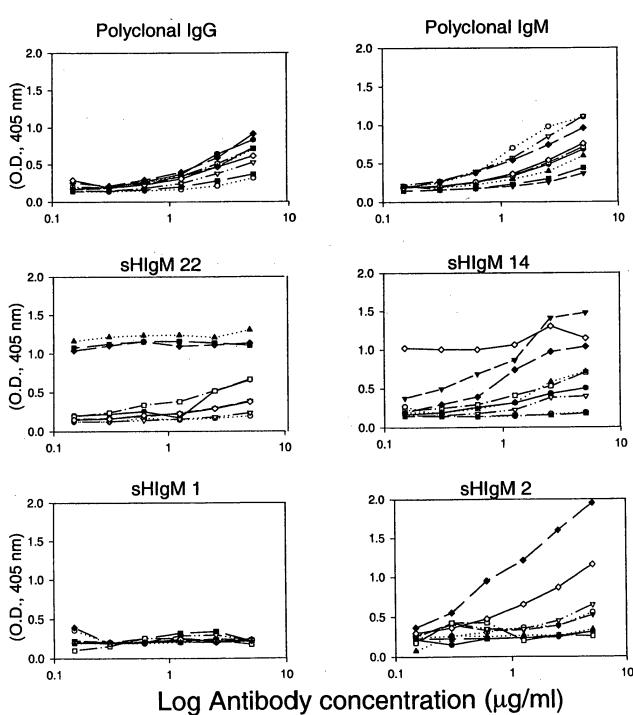




FIG. 33

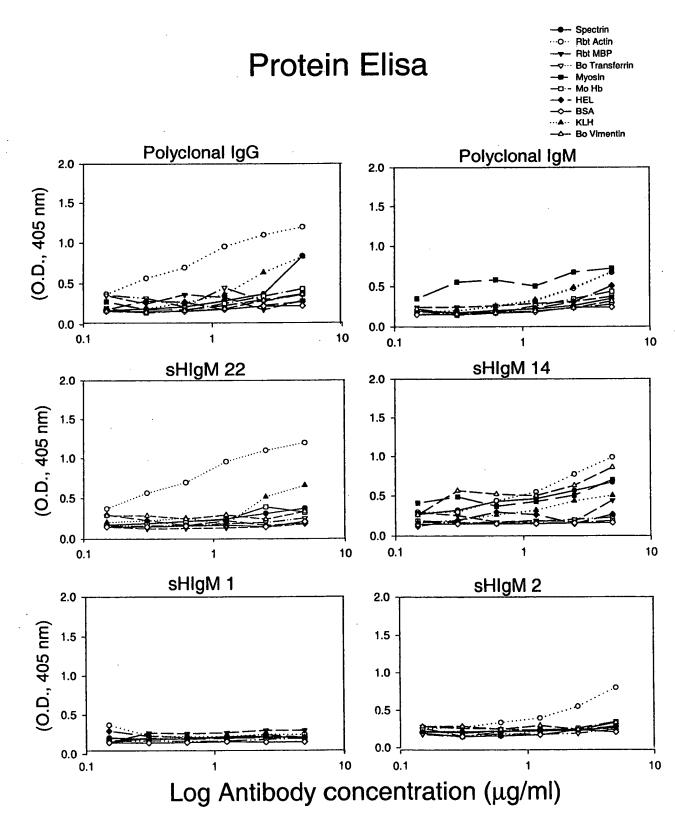
Hapten Elisa













/FR	1													
1	2			5 <i>V</i>		7	8 <i>G</i>	9 G	10 G	11 <i>V</i>			14 P	15 <i>G</i>
<u>Q</u> _CAG	V GTG													
	e A sl							G						
	e B sl	_												
16	17	18	19	20	21	22	23	24	25	26	27	28		
<u>R_</u>	S		<u>_R_</u>	L CEC	<u>S</u>	<u>C</u>	A CCA	A CCC	<u>S</u>	$\frac{G}{CCN}$	<u> </u>	T	F	S
AGG	TCC	CTG	AGA	CTC	TCC	TGT	GCA	GCC	TCT	GGA	110	ACC	110	AGI
/CDI	R1				-/FR2	?								
31	32	33	34	35	36		38							
${oldsymbol s}$	${oldsymbol s}$	\boldsymbol{G}	M	\boldsymbol{H}	W	V	R	Q	A				<u>G</u>	
AGC		GGC	ATG	CAC	TGG	GTC	CGC		GCT	CCA	GGC	AAG	GGG	CTG
	C							A						
				/ CDR	2									
46	47	48		50	51	52	52A	53	54	55	56	57	58	59
E	W	V	A	VI) I_	S	Y	D	G	S	R	K	Y	Y
GAG	TGG	GTG	GCA	GTT	ATA	TCA	TAT	GAT	GGA	AGT	AAT	AAA	TAC	TAT
					T						GG			•
				A C		/ ED2.					GG			
60	61	62	63							70	71	72	73	74
A	D		V.	K		R	F	T	I	<u>S</u>	R	D	N	<u>.s</u>
GCA														
~~	GAC	TCC	GTG	AAG	GGC	CGA	TTC	ACC	ATC	TCC	AGA	GAC	AAT	TCC
00	GAC	TCC	GTG	AAG	GGC	CGA	TTC	ACC	ATC	TCC	AGA	GAC	AAT C	TCC
00	GAC	TCC	GTG	AAG	GGC	CGA	TTC	ACC	ATC	TCC	AGA	GAC		TCC
		TCC	GTG	AAG	GGC	CGA	TTC	ACC			·		C 	
 75	 76	TCC 	GTG 	AAG 79	GGC 80	CGA 81	TTC 82	ACC 82A	82B	82C	 83		C C 85	 86
75 K	76 N	TCC	GTG 78 L	AAG 79 Y	GGC 80 L	CGA 81 <i>O</i>	TTC 82 M	82A N	82B <i>S</i>	82C <i>L</i>	83 T	84 A	C C 85 <i>D (E</i>	86
75 K	 76	TCC	GTG 78 L	AAG 79 Y	GGC 80 L	CGA 81 <i>O</i>	TTC 82 M	82A N	82B <i>S</i>	82C <i>L</i>	83 T	84 A	C C 85 <i>D (E</i>	86
75 K	76 N	TCC 77 T ACG	GTG 78 L	AAG 79 Y	GGC 80 L	81 O CAA	TTC 82 <u>M</u> ATG	ACC 82A N AAC	82B <i>S</i> AGC	82C L CTG	83 T AGA	84 A	C C 85 <i>D (E</i>	86
75 <u>K</u> AAG	76 <i>N</i> AAC	TCC 77 T ACG T T	GTG 78 L CTG	AAG 79 Y TAT	80 L CTG	81 O CAA	TTC 82 <u>M</u> ATG	ACC 82A N AAC	82B <i>S</i> AGC	82C L CTG	83 T AGA CG C	84 A GCT	C C 85 <i>D</i> (E GAG C	86 <u>) D</u> GAC
75 <u>K</u> AAG	76 N AAC	77 T ACG T T	78 L CTG C	79 <u>Y</u> TAT	80 L CTG	81 <i>O</i> CAA 93	82 M ATG	82A N AAC	82B <i>S</i> AGC	82C <i>L</i> CTG	83 T AGA CG C	84 A GCT	C C 85 <i>D</i> (E GAG C	86) D GAC
75 <u>K</u> AAG	76 N AAC	TCC 77 T ACG T T	78 L CTG C	79 Y TAT 91	GGC 80 L CTG	CGA 81 0 CAA 93	TTC 82 M ATG 94 K	ACC 82A N AAC / CDR 95	82B S AGC 3 96 V	82C <i>L</i> CTG 97	83 T AGA CG C	84 A GCT 99	85 D(E GAG C	86 D GAC 100A
75 <u>K</u> AAG	76 N AAC	TCC 77 T ACG T T	78 L CTG C	79 <u>Y</u> TAT 91 Y TAC	80 L CTG 92 C	CGA 81 0 CAA 93	TTC 82 M ATG 94 K	82A N AAC /CDR 95 G	82B S AGC 3 96 V GTG	82C <i>L</i> CTG 97	83 T AGA CG C	84 A GCT 99 S ATT	C C C C C C C C C C C C C C C C C C C	86) D GAC 100A TAC
75 <u>K</u> AAG	76 N AAC	TCC 77 T ACG T T	78 L CTG C	79 Y TAT 91	80 L CTG 92 C	CGA 81 0 CAA 93	TTC 82 M ATG 94 K	ACC 82A N AAC / CDR 95	82B S AGC 3 96 V GTG	82C <i>L</i> CTG 97	83 T AGA CG C	84 A GCT 99	85 D(E GAG C 100 P	86 D GAC 100A
75 <u>K</u> AAG 87 T ACG	76 N AAC 88 A GCT	TCC 77 T ACG T T 89 V GTG	78 L CTG C TAT	79 Y TAT 91 Y TAC T	80 L CTG 92 C	81 O CAA 93 A GCG	82 M ATG 94 K AAA	82A N AAC /CDR 95 G GAG GA	82B S AGC 3 96 V GTG	82C L CTG 97 T ACT	83 T AGA CG C C 98 G GCT G	84 A GCT 99 S ATT G	85 D(E GAG C 100 P CCC G	86 D GAC 100A T TAC ACG ACG
75 <u>K</u> AAG 87 <u>T</u> ACG	76 N AAC 88 A GCT	77 7 ACG T T S9 V GTG	TAT /FR4	79 Y TAT 91 Y TAC T 104	92 C TGT	81 O CAA 93 A GCG	TTC 82 M ATG 94 K AAA	ACC 82A N AAC / CDR 95 GAG GAA GA 108	82B S AGC 3 96 V GTG	82C L CTG 97 T ACT	83 T AGA CG C 	84 A GCT 99 S ATT G G	C C C S S S S S S S S S S S S S S S S S	86 D GAC 100A T TAC ACG ACG
75 <u>K</u> AAG 87 T ACG	76 N AAC 88 A GCT	77 7 ACG T T 89 V GTG	GTG 78 L CTG C 90 Y TAT /FR4 103	79 Y TAT 91 Y TAC T 104 G	92 C TGT	CGA 81 0 CAA 93 A GCG	TTC 82 M ATG 94 K AAA	ACC 82A N AAC /CDR 95 GAG GA GA 108	82B S AGC 3 96 V GTG 109	82C L CTG 97 T ACT	83 T AGA CG C 98 G GCT G G	84 A GCT 99 S ATT G G 	C C C S G G G G G G G G G G G G G G G G	86 D GAC 100A T TAC ACG ACG
75 K AAG 87 T ACG 100 L TTT	76 N AAC 88 A GCT	77 7 ACG T T 89 V GTG	GTG 78 L CTG C 90 Y TAT /FR4 103	79 Y TAT 91 Y TAC T 104 G	92 C TGT	CGA 81 0 CAA 93 A GCG	TTC 82 M ATG 94 K AAA	ACC 82A N AAC /CDR 95 GAG GA GA 108	82B S AGC 3 96 V GTG 109	82C L CTG 97 T ACT	83 T AGA CG C 98 G GCT G G	84 A GCT 99 S ATT G G 	C C C G G G T T C A	86) D GAC 100A T TAC ACG ACG
75 <u>K</u> AAG 87 T ACG	76 N AAC 88 A GCT	77 7 ACG T T 89 V GTG	GTG 78 L CTG C 90 Y TAT /FR4 103	79 Y TAT 91 Y TAC T 104 G	92 C TGT	CGA 81 0 CAA 93 A GCG	TTC 82 M ATG 94 K AAA	ACC 82A N AAC /CDR 95 GAG GA GA 108	82B S AGC 3 96 V GTG 109	82C L CTG 97 T ACT	83 T AGA CG C 98 G GCT G G	84 A GCT 99 S ATT G G 	C C C S G G G G G G G G G G G G G G G G	86) D GAC 100A T TAC ACG ACG



/FR1	L													
1	2	3	4	. 5	6	7	8	9	11	12	13	14	15	16
0	_ <u>S_</u>	<u>V</u>	L	$\frac{T}{2\pi a}$	0	<u> P</u>	<u>P</u>	_ <u>S</u> _	<u>V</u>	<u>_S</u> _	_A_	_A_	<u>P</u>	G
					CAG			TCA	GTG	TCT		GCC	CCA	GGA
Clon	e i sh	I-IgM.	22 VX	.	G		T				T			
Clone	e II sł	-lgM	.22 V	ሌ	G		\mathbf{T}				T			
					22									
<u>0</u> _	<u>K</u>	<u>V</u>	T_{\sim}	I	_S	_ <u>C</u> _	<u>_S_</u>	G	<u>.s</u>	<u> </u>	<u>S</u>	_ <u>N</u> _	<u></u>	<u>G</u>
CAG	AAG	GTC	ACC	ATC	TCC	TGC	TCT	GGA	AGC	AGC	TCC	AAC	ATT	
														C
					/FR2-									
30	31	32			35					40	A 1	42	43	44
					W_									
AAT	AAT	TAT	GTA	TCC	TGG	TAC	CAG	CAG	СТС	CCA	GGA	ACA	GCC	CCC
		T	0					A						
		T						A						
				,	/ CDR	2						-/FR	3	
					50									
R(K)	<u> </u>		<u>I</u> _	<u>Y</u>	D	<u></u>	\underline{T}	<u>_K</u>	R	P	_ <u>S</u> _	<u></u>	I	<u>P</u>
	CTC	CTC	ATT	TAT	GAC			AAG	CGA	CCC	TCA	GGG	ATT.	CCT
G						T T	C							
						.T							_ ~ ~ -	
60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
GAC	CGA	TTC	TCT	GGC	TCC	AAG	TCT	GGC	ACG	TCA	GCC	ACC	CTG	
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75	76				80									
	T													$G(\mathbf{E})$
ATC	ACC	GGA	CTC	CAG	ACT	GGG	GAC	GAG	GCC	GAT	TAT	TAC	TGC	GGA
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A_V T	ጥርር	GAT	AGC	AGC	CTG		 ጥ	GTG	GTA	TTC	GGC	GGA	GGG	ACC
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103	104				A107									•
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Sequence of MSI 19-D10 VH

FR1															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CAG	GTG	CAG	CTG	CAG	GAG	TCG	GGC	CCA	GGA	CTG	GTG	AAG	CCT	TCG	GAG
Q	V	Q	L	Q	E	S	G	P	G	L	V	K	P	S	E
														/ CDR) 1
17	18	19	20	21	22	 23	 21	25	26	27	28	29	30	7 UUN 31	
	CTG														
T	L	S	L	Т	C	T	V	S	G	G	S	I	S	S	
			,	/FR2											
	33														
	TAC														
1	Y	W	۵	W	Т	ĸ	Q	P	P	G	V	G	L	£	
			/ CDF	12											
47	 48	49	50	51	52	53	54	55	56	57	58	59	60	61	
TGG	ATT	GGG	TAT	ATC	TAT	TAC	AGT	GGG	AGC	ACC	AAC	TAC	AAC	CCC	
W	I	G	Y	I	Y	Y	S	G	S	${f T}$	N	Y	N	P	
	 -			, ED2											
62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	
	CTC														
S	L	K	S	R	V	${f T}$	I	S	V	D	T	S	K	N	
77	78	79	80	81	82			82C		84	85	86	87	88	-
	TTC														
Q	F	S	L	K	L	S	S	V	${f T}$	Α	Α	D	\mathbf{T}	Α	
							_					:			
					/	CDR	13								_
89	90	91	92	93	94	95	96	97	98	99	100	1007	A100F	31000	3
GTG	TAT Y	TAC	TGT	GCG	AGG	TCG	GCA	CAG	CAG	CAG	CTG	GTA	TAC	TAC	
V	1	1	C	A	Λ.	3	A	Q	Q	Q	Ц	٧	1	1	
			FR4.											/Cu-	
1001	101	102	103	3 104	1 105	5 106	5 10	7 108	3 109	9 110	111	L 112	2 113	3 114	Į.
TTT	GAC	TAC	TGG	GGC	CAG	GGA	ACC	CTG	GTC	ACC	GTC	TCC	TCA	GGG	
F	D	Y	W	G	Q	G	T	L	V	T	V	S	S	G	



Sequence of MSI 19-D10 $V\kappa$

	1													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
GAC	ATC	GTG	ATG	ACC	CAG	TCT	CCA	GAC	TCC	CTG	GCT	GTG	TCT	CTG
D	I	V	M	T	Q	S	P	D	S	L	A	V	S	L
								, CDE	34					
16	17	18	10	20	21	·	,	7 GDF 2 A	1/ 25	26	27	273	275	270
	GAG	AGG	GCC	ACC	ATC	AAC	TGC	AAG	TCC	AGC	CAG	ACT	2/D	2 / C ጥጥል
	E													
									-	_	-	_	·	_
										, ED2				
27D	27E	27F	28	 29	 30	 31	32	 33	/	/ <i>ГП2</i> *	36	 37	38	
	AGC													
	s													
											_	-	-	
											, CDE	10		
30	40		 12											
	CCA													
	P													
	_		*	•	_		_	_	-	-	•••			-
			. ===											
	 55													
	GAA													
	E													
											_		_	_
69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
	GAT													
T	D	F	T	L	T	I	S	S	L	Q	A	E	D	v
						CDE	3							/FR4
84	85				-	_			93	94				•
	GTT													
	v				Q						P	L	T	F
		-	_	_	~		_	_	- -	-		_	- -	=
00					104			-				111	110	113
99 GGC	CCT				104 GTG									
~	CCI	~	m m	nnn "	17	SW I	T -	77	- T	w T	•••		-	~



FIG. 39A

Mixed Primary Glia sH-lgM.22 Ca²⁺ response

- ratio cell #1
- ratio cell #2
- \triangle sH-lgM.22 (3 μ g/ml)
- ▲ Br-A23187 (10μM)

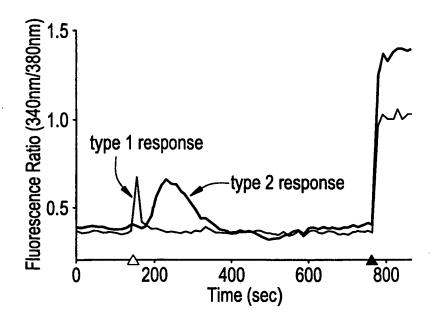


FIG. 39B

Mixed Primary Glia SCH 94.03 Ca²⁺ response

- ratio cell #1
- ratio cell #2
- Δ SCH 94.03 (3µg/ml)
- ▲ Br-A23187 (10μM)

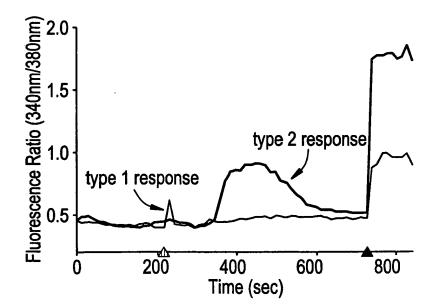


FIG. 39C

Mixed Primary Glia
CH 12/sH-lgM.14 Ca²⁺ response

- ratio cell #1
- ratio cell #2
- A CH 12 (3μg/ml)
- \triangle sH-lgM.14 (3 μ g/ml)
- **A** Br-A23187 (10μM)

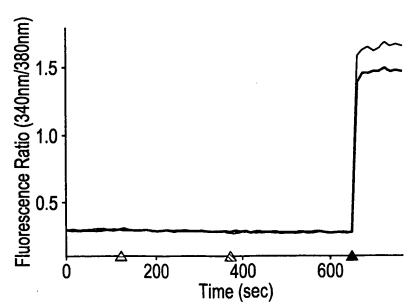




FIG. 40A

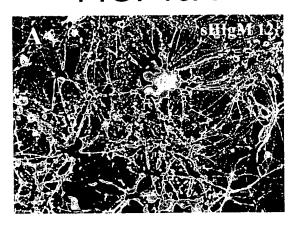


FIG. 40B

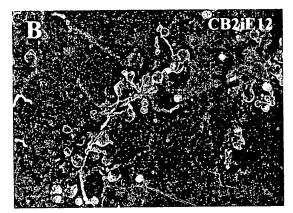




FIG. 41

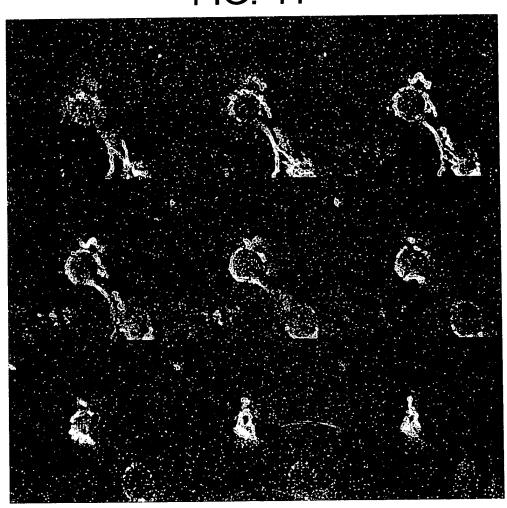




FIG. 42A

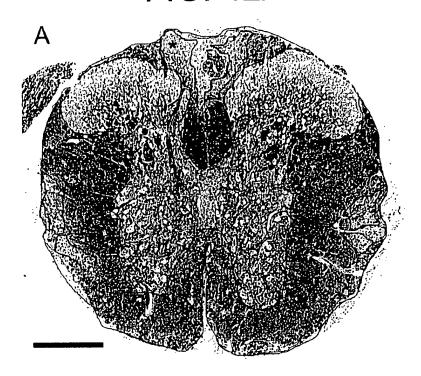
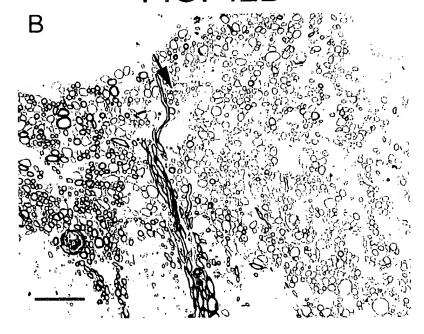


FIG. 42B





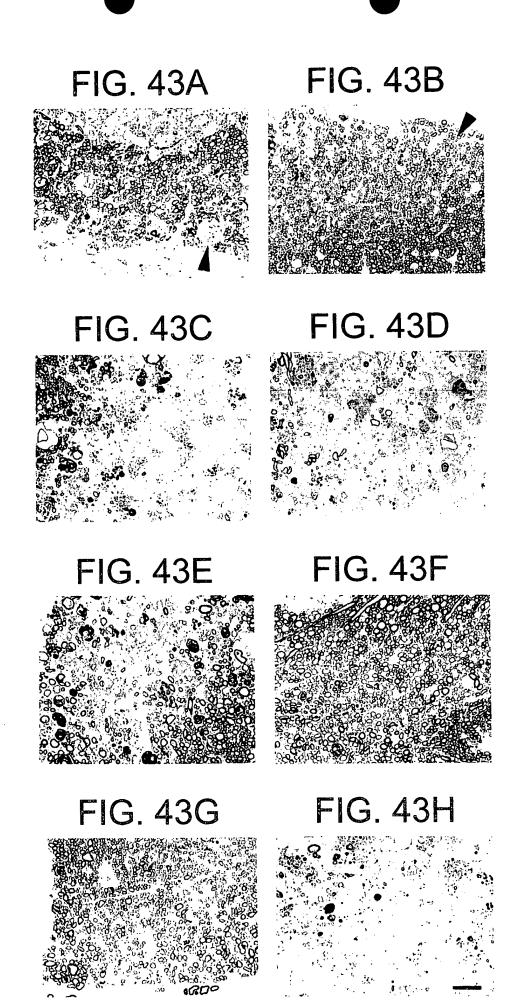


FIG. 44A FIG. 44B

FIG. 44C FIG. 44D

C D D

Translation of CB2b-G8 $V_{\rm g}$:

1				5				x	10	I A . GCC	v	v	0	15 P	G	R	5	L	20 R	L	S TCC
C TGT	A GCA	25 A GCG	S TCT	G GGA	F TTC	I ATT	30 F TTC	S AGT	_ CDI S AGC	R1 - Y TAT	IMG' G GGC	r 35	•••		•••	< M ATG	40 H CAC	W TGG	V GTC	R CGC	Q CAG
45 V	P	G	к	G	50 L	E	W	V	A	> 55 V GTT		W TGG	Y TAT	CDR2 D GAT	2 - 1 60 G GGA	IMGT S AGT	D GAT	K AAA		65	Y TAC
										T ACC											Y TAT
L	90 O	м	N	s	L	95 R	A	E	D	T ACG	100 A	v	Y	Y	С	105 A	R AGA	D	R	S	110 S AGT
· ·	VV	1	**		_	ע		**	G	Q CAG	•	•		•	-	•	_	S TCA			



Translation of CB2b-G8 V_{λ}

<						F	R	1	-	I	M	G	T								
1				5				_	10		-	_		15 P	~	•	~	-	20_	-	s
						X TT.	X XGC	CTC		CTG	TCT	GGG	TCT	CCT	GGA	CAĞ	TCG	ATC	ACC	ATC	TCC
																					•
			-						CDR	L - :	IMGT					- <					
С	T	G 2	25 T	s	s	D	v :	30 G	G	Y	N	Y :	35			v	S	10 W	Y	0	0
				AGC	AGT	GAC	GTT	GGT	GGT	TAT	AAC	TAT	• • •	• • •	• • •	GTC	TCC				
_	_	_		_		_	_														_
F		2		I										CDR	2 - 3	IMGT					<
45 #	D	G	ĸ	Δ	50 P	ĸ	т.	м	т												
CAC	CCA	GGC	AAA	GCC	ccc	AAA	CTC	ATG	ATT	TAT	GAT	GTC	AGT								GAT
																			_	_	
													_	R	_		I	М	G	T	
70	_		~	17	75		NT.	ъ	E'	80	G	Q	ĸ		85	q	G	N	т	A	s
CGG	CCC	TCA	GGG	GTT	TCT		AAT	CGC	TTC	TCT	GGC	TCC	AAG			TCT					
															>						
																		_CDR	3 - :	IMGT	
т.	90	т	9	G	T.	95	Δ	F	ח	肥	100	n	v	Y	c	105 S	s	Y	т	s	110 S
CTG	ACC	ATC	TCT	GGG	CTC	CÃG	GCT	GAG	GAC	GĀG	GCT	GAT	TAT	TAC	TGC	AGC	TCA				AGC
																		•			
		-					115					120				;	125				
130 S	s	v	v	F	G	G	G	т	ĸ		' T	v	L	G	0	P	ĸ	A	A	P	S
AGC	TCT	GTG	GTA	TTC	GGC	GGA	GGG	ACC	AAG	CTG	ACC	GTC	CTA	GGT	CĀG	CCC	AAG	GCT	GCC	CCC	TCG

FIG. 47A

DHFR amplification of 94.03k

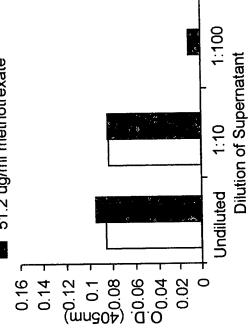
4 5 0.2 51.2 0.2 51.2 Neg Pos

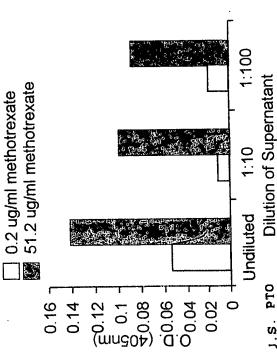
FIG. 47C

Clone #5 Kappa Chain Elisa

0.2 ug/ml methotrexate
51.2 ug/ml methotrexate

Clone #4 Kappa Chain Elisa













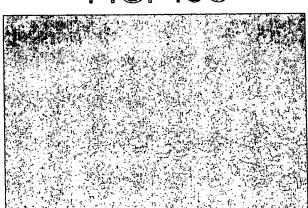
Mouse 94.03

FIG. 49B



Humanized 94.03 clone 1

FIG. 49C



Humanized 94.03 clone 2

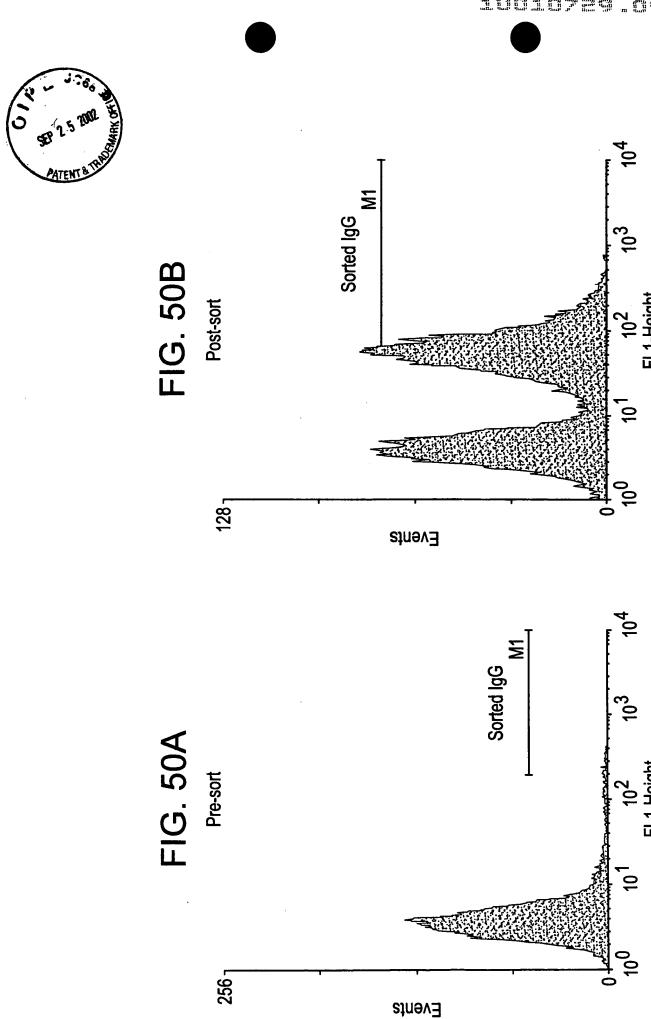
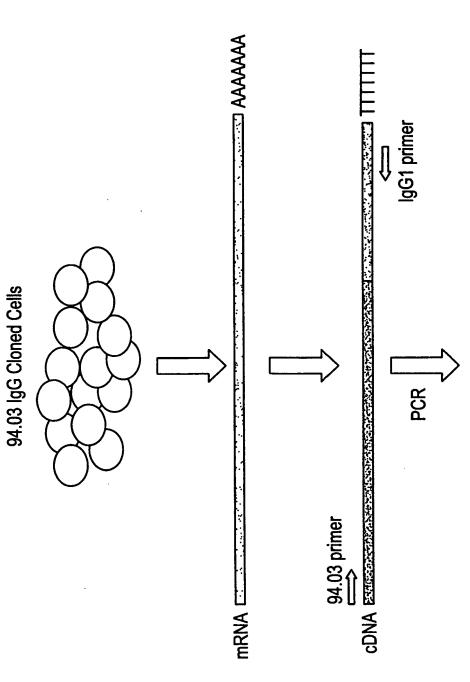




FIG. 51 Sequencing of 94.03 lgG



ATGCAGTTAACATGCATACTGAACTGCATGCTTTCCAG
Sequence with 94.03 V region plus IgG1



09 $V_{_{\rm H}}$ Sequence with translation:

<						F	R	1	-	I M	G	T									-
1			į	5				1	10				1	5				2	0		
Q	D	Н	L	Q	Q	S	G	P		E	L	V I	K	P	G	Α	F	V	K	I	S
CAG	GAT	CAC	CTG	CAG	CAG	TCT	GGA	CCT		GAG (CTG (STG A	AAG	CCT	GGG	GCT	TTT	GTG	AAG	ATA	TCC
			>													<					
									CDR	1 -	imgt				2 5					40	
С	к	A	s	G	25 Y	т	F	T	N	3 U Y	IMGT D GAT				33	L	N	W	v	R	Q
TGC	AAG	GCT	TCT	GGT	TAC	ACC	TTC	ACA	AAC	TAC	GAT					CTA	AAC	TGG	GTG	AGG	CAG
_	_	_		_		_															
F -	R	2	-	I			T														
														CDR2	- I	MGT					
45 R	ъ	G	0	G	50 t.	E	w	т	G	55 W	I	Y	P	G	N N	D	N	T		. 65	K
AGG	CCT	GGA	CÃG	GGC	CTT	GAG	TGG	ATT	GGA	TGG	ATT	TAT	CCI	GGA	AAT	GAT	' AAT	ACT	·		. AAG
												-	F	R	3	-	I	M	G	Т	
		_	70	_			_ 7	75		~	L	{	B0	_	ν	c		85 m	T.	Α	v
TAC	N AAT	E GAG	K AAG	TTC	K AAG		GGC (L CTG (GCC '	TCA	CTG .	ACT	GCA	GAC	AAG	TCC	TCC	ACC	ACA		
					.										>						
	90					95					100					105					110 R
L	Н	L	s	S	L	T	s	E	s	S	A	V	Y	F	C	A	R	G	L	P	R
TTG	CAT	CTC	AGC	AGC	CTG	ACT	TCT	GAG	AGC	TCT	GCA	GTC	TAT	TTC	TGT	GCF	AGA	ı GGC	; T17	1 ((r AGG
CDB	·	TMCm																			
CDR.				115		_		12	0												
G	W	Y	F	D	v	W	G	Α	G	T	T	V	T	V CTC	S	S	A	,			
GGC	TGG	TAC	TTC	GAT	GTC	TGG	GGC	GCA	فافافا	ACC	ACG	GTC	, ACC	. GIC	100		s GCI				



Translation of 09 kappa light chain 1:

	!		E	ACC
			ы	AGG GTC ACC TTG ACC
٠		20	۲	ACC
			>	GTC
•• _1	1		œ	AGG
디			ы	GAG
chain			ტ	CCC AAA TCC ATG TCC ATG TCA GTA GGA GAG
		15	>	GTA
Light	E		ഗ	TCA
	ტ		Σ	ATG
карра	Σ		ഗ	TCC
D D	н		М	ATG
,	1	10	S	TCC
ជ	, 		X	AAA
1110	DC;		ሷ	သသ
Translation of	<u>լ</u>		ß	ACC CAA TCT
rar	; ! !		Ø	CAA
51	!	Ŋ	H	ACC
53			M	
5	1		>	ATT GTA ATG
(D)	1		н	ATT
Ī	\ >	⊣	z	AAC

				.	T ACT
-	Q CAG	¦ z	AAC	٤٠	F TTC
	CAA	. 65	:	ტ	D GAT
į	Y TAT		:	×	85 T ACA
	T TGG		•	Н	GCA GCA
1	40 S TCC		•	1	S TCT (
\ -	V GTT	- IMGT 60	:	т	
	:		:	rc;	:
	:	CDR2	:		4
	:		TCC	Įτι	80 0 6
	. :		GCA I		S AGT
	35				ი გმ
IMGT			999		ACA .
1	· :	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
CDR1	Y TAT	V 55	ATA		r TTC
Ü	T ACT	1	CTG		75 R CGC
	30 V GTT 1	1	CTG (D GAT
	V GTG		AAA O	į	:
				1	မှ ပိပ္ပ
	N AAT	对 50 00 0			U U
	E	H	TCT		V .
^ !	S. AGT	, ,	CAG		70 ი იიი
	25 A GCC	C. [7	GAG	1	T ACT
	K AAG	ρ C4	cca		Y TAC
1 1	C TGC	F4 44 C2 X	AAA		

	IMGT	110	×	TAT
	7		ഗ	AGC
	CDR3		×	TAC
			Ö	GGT
			O	CAG
		105	ტ	
^!			ပ	TGT GGA
1 1			Ħ	CAC
1 1 1			×	TAT
			Ω	GAT
1		100	æ	GCA GAT
1			Ы	CTT
1			Ω	GAC
1111			回	GAA
1			Ø	GCT
1 1		95	0	GTG CAG GCT
1			>	GTG
1			ഗ	AGT
1			ß	AGC
			Н	ATC
		90	H	CTG ACC ATC AGC
1 1			ļ	CTG

P Y T F G G GC CCG TAC ACG TTC GGA GGG GGG

115 P Y T F G G G CCG TAT ACG TTC GGA GGG



Translation of 09 kappa light chain 2: FIG. 54

				1	
	n AAT	EGAG	T ACT	TACT	IMGT 110 2 Y AA TAC
	I ATT	O.S.	65	H H	- II GAA
	20 T ACT	Y		G D GAT	CDR3 N AAT
	IATT	W T		85 A ACA	CAT
1	T ACC 7	40 A GCC 1		н р В В	O CAG (
	E GAA A	4 L TTA G	- Le :	s TCT G	105 Q CAA C
i		ν "Ε Ι	IMGT	Ĕ	i
	G GGA		1 09 :	m : ′	, of the transfer of the trans
	15 P CCT		CDR2	<u>د</u> :	Y
€+	F TTT		s TCC	표 80 GGA	Y TAT
ტ	(독 <mark>강</mark>	35	GGA	s AGT	M ATG
×	AGCT	IMGT	STCT	ဗ ဗ္ဗ	100 A GCA
н	CIT	H ! :	- > -	s AGT	F
1	10 Y TAT	CDR1 Y TAT	IATC	TTC	D
7	TCT	A A A A	CTT	75 R AGG	E GAA
œ	P CCA	30 S AGT	T L CTT	s TCA	G P
Įτι	STCT	IATT	G K AAG	:	95 E GAG
!	CAG	S	M 50 N AAT	P CCA	CHO
1	5 T ACC	AAG	I T ACT	IATT	s AGC
	ATA	S AGT	AAA	70 9 9GA	SAGT
!	V Q I GTC CAG ATA	25 A GCA	2 GGA	Q S CAA TCT	ATC
!	GTC	R AGG	R P CCT	CAA	90 P.T.
>	1 D GAT	C R TGT AGG	Р 45 R AGA	I THG	CTC



FIG. 55 Translation of AKJR 4 Heavy Chain:

_							
1	s TCC	CAG	! ! !	Y TAT		F TTT	IMGT 110 3 P 3T CCC
	L CTC	မ ပို့	•	65	E	v GTG	e GGT
	20 R AGA	orc Grc		:	O	ACG	CDR3
	r CTG	7G 7GG		S TCA	Œ	85 S 3 AGC	E GAG
1	န ၂၃	40 S AGC		SAGT	н	K AAG	CAS SAS
!	9 9	ATG	Į.	G T GGT	ı	s TCC	105 A GCG
1	ი გე	:	₹ 1		m	N AAT) L
1 1	15 P CCT	:	DR2	DGAT	œ	DGAC	Y
E	CAG	:	Č	0 p	(tı	80 R AGA	Y
ტ	V GTA	35		S AGT		s TCC	I ATA
Σ	r TTG	GT _ A GCC		CIT		IATC	100 A GCC
н	ဗ္ဗ	- IMGT Y A TATE GCC	٨	55 S AGT		ACC	ACG
ı	10	CDR1	1	s TCA		F	D GAC
+	g GGA	ATC		V GTC		75 R 3 CGA	E GAG
æ	უ ე	30 F	' بع	w TGG	į	် ဗဗ္ဗ	₽
ſΞͱ	S TCT	S	ტ	E GAG		•	95 R AGA
	E GAA	F	Σ	50 L CTG		K AAG	L CHG
 	5 L TTG	G GGA	н	g GGA		v GTG	S AGC
1	LCTA	S TCT	1	K AAG		70 S TCC	S AGC
 	CAA	25 A GCC	7	ე ე		D GAC	r CTC
!	V GTG	A GCA	~	GCA P	1	A GCA	90 CAR
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1 E GAG	ngr o	ĮΣų	45 A GCT	!	Y TAT	CIC

Q R R W G Q G T L V T V S S G S A S A P T L CAG CGT CGC TG GGA ACC CTG GTC ACC GTC TCA GGG AGT GCA TCC GCC CCA ACC CTT



FC

	1	
		T ACT
	İ	I ATC
		20 ACC
	!	orc STC
		R AGA
	1 1 1	D GAC
iain:	! ! !	G D R V GGG GAC AGA GTC
ည် ည	 	
Ligh	E	15 S V TCT GTA
врра	ტ	₽ 3C P
4 7	I M G	S A TCT GCA
KJR	н	cig Cig
Franslation of AKJR 4 Kappa Light Chain:	1	10 T L ACC CTG
tion	ન	S
nsla	æ	P CCT
Tra	Eri CX	5 T Q S P ACC CAG TCT CCT
		CAG
_	1	5 T Acc
2		ATG
J. 30	1 1	O KS O KS

T ACT	CAG	N AAT	! ! !	T ACT	- IMGT 110 S Y AGT TAC
IATC	CAG CAG	• 65	E	FTTC	- IN S AGT
ACC	Y		ဗ	GAA	CDR3
V GTC	¥ TGG	:	Σ	85 T ACA	TAT
R AGA	40 AA	:	н	3 9 999	୍ଦ କୁ
DGAC	TTG	IMGT -	ŧ	S TCT	105 O CAG
ე ექ		- IN 60	٣	: /	် ပည္
V GTA	:	CDR2	æ	•	¥ TAC
S TCT		F	ţz.	80 9 9	Y TAT
A GCA	35	A		S AGT	ACT.
s TCT	IMGT _	K AAG	!	ဗ ဗ	100 A GCA
CIG	ži .	> 55 Y TAT		R AGA	s TCT
ACC	CDR1 W TGG	I ATC		r TTC	D GAT
S TCC	S AGC	r Cris		75 R A AGG	D GAT
PCCT	30 S AGT	r J		S TCA	P CCT
S TCT	IATT	G K AAA		:	95 Q CAG
CAG	S AGT	M 50 P CCT	!	PCCA	C.T.C.
T ACC	CAG	I A GCC		V GTC	S
M ATG	S AGT	- K AAA		70 G f GGG	S
CAG	25 A GCC	2 G GGG	 	S AGT	I
IATC	ස වි	R P CCA	!	E Gaa	90 TACC
D GAC	ည္မွင္	F 45 K AAA	1	L TTA	1 J. D.

	Ŀ	TTC
	>	GIC
130	တ	TCT
	Д	CCA
	Ø	SS
	¥	GCT
	>	GIG
125	E	ACT
	ĸ	CGA
	×	AAA
	Н	ATT
	Ω	GAC
120	>	GTG
	×	AAG
	E	ACC
	ტ	999
	ტ	GGA
115	U	GGC GGA
	ኴ	TTC
	₽	ACT
	ᄓ	CIC
	ሷ	CCC



Translation of CB2i-E12 Heavy Chain: FIG. 57

. I 1	s TCC	O CAG	AAC	Y	110 Y TAT
	V GTC	R CGA	•	A GCC	S TCG
	20 K AAG	> STG		G ACA	R CGA
1	V GTG	W T	T ACA	8 8 85 86 86	D GAT
	S TCA	40 H CAC	9 99	I ATC	R AGA
1	A GCC	ATG	IMGT _) G G GT GGT	ı s TCC	105 A GCG
 	E GAG	:	- IN 60 S AGT	3 ACG	ng TgT
! ! !	15 X X X C G		CDR2 N AAC	R D GAC	¥ TAC
E	K AAA		. E⊣	F 80 R AGG	Y TAT
Ö	× AXG	35	N AAC	ACC	V GTG
Ħ	×××	IMGT	IATC	M ATG	100 A GCC
н	×	- IM Y TAC	- > 55 W W	H ACC	T ACG
ı	10	CDR1 G	GGA	V GTC	D GAC
⊣	R AGG	C C ACC	MATG	75 R AGG	D GAC
ĸ	× S	30 F TTC	T W TGG	000	STCT
្រុ	:	T ACC	G E GAG		95 R AGA
	:	Y	M 50 L CTT	CAG	r CTG
! ! !	٠ .	g g	I G G G G G G G G G G G G G G G G G G G	T.T.T.	R AGG
; !	:		CAA (70 K AAG	SAGC
	•	25 A GCT	2 . G	CAG .	LCTG
	•	K K AAG (R P CCT (A GCA (90 E GAG (
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ਜ :	C DH	F 45 A A GCC (Y TAT	M ATG

P G R N Y F D Y W G Q G T L V T CCG GGA AGG AAC TAC TTT GAC TAC TGG GGC CAG GGA ACC CTG GTC ACC CDR3 - IMGT



Translation of CB2i-E12 kappa chain: FIG. 58

							_
1	s TCC	Q CAG	>	S AGC		T ACT	IMGT 110 S S TCT
	r CTC	O CAG	•	. 65	۴	F TTC	1 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	20 T ACC	Y		:	ტ	D GAC	CDR3
	A GCC	W TGG		:	Ħ	85 T ACA	Y
	R AGA	40 A GCC		:	н	999 999	CAG
1	E GAA	L L TTA	IMGT.	:	1	S TCT	105 Q CAG (
	9 9		Ä		က	:	C TGT
1	15 P CCA		CDR2	•	æ	:	Y
E	S TCT			S TCC	ſτι	80 G GGG	Y
ര	L TTG	35		A GCA		S AGT	V GTG
Ħ	S TCT	IMGT		G GGT		ဗ္ဗ	100 A GCA (
н	L CTG	- IN Y TAC	^ }	55 Y TAT		S AGT	F
1	10 T ACC	CDR1 S AGC		I ATC	i	F	D GAT
⊣	ა გ	S AGC		CIC	į	75 R AGG	E
ĸ	P	30 S AGC	' €+	CTC	; ; ;	D GAC	P
Į.,	S TCT	V GTT	ტ	r Agg	1	:	95 E GAG
 	O CAG	S	×	50 PP CCC		P CCA	r CTG
 	5 T ACG	Q S CAG AGT	н	A GCT		I ATC	S R L
	L l'TG	S SAGT	1	o Sag		70 G GGC	S
!	V r GTG	25 - S S GCC AGT	7	0 090 I	1	T CT	IATC
1	I ATT	R	rx	မှ ည		A GCC 7	90 T ACC
>	1 E GAA	o Tgc	[t4	45 K AAA	; ; !	R AGG	r CTC

115 H T F G Q G



Translation of CB2i-E7 Heavy Chain: FIG. 59

	ຮ		C P C A G	!		Z	AAC	! ! !	≽ı	TAT	
	ا ئى ر		ဗ္ဗ	V	65		:	E	L	CTG	
	20 8 8 8		I ATC				:	ტ	ഗ	TCA	
 	اع ال ال	•	TGG.			E	ACA	×	85 N		
	S D	1	40 S AGC			×		н	×		
1		1	M ATG		i		AGT	ı	Æ	ည	ļ
	ა ტეტ				- IMGT 60	ഗ		m		AAC (. 1
	15 P CCT (CDR2		AGT 7	ద		GAC 7	
E	K ;				<u>1</u>		AGT 1	ഥ	80 R	ı	
ტ	V GTC 2		35			ഗ			ຶ	1	
Σ	L TTG (н		} ! !	н	1	
н	- ဗ ဗ္ဗ	1	7.3		- 1	×			E	1	
1 4	10	CDR1	GAC	- 1			TCA	1	Ľι	· 1	
-	x g	_	SAGT	- 1			GTT	. !	75 R	- 1	
K	•		30 F	1			TGG	i ! !	O		
ഥ			ACC :				GAG	į			
!			F TTC 7			ы		į	×	AAG	
	ഹ		G G				999		>	· I	
; '		^	S TCT			×	AAG (70 S		
			25 A GCC 1				GGG 1	i		GAC	
		1	A 2 GCA 6				CCA	1	æ	GCA	
· · ·	.	! ! !	C TGT				GCT	 	> +	TAC (,

90 L Q M N S L R A E D T A V Y Y C A R D R S S CTG CAA ATG AAC AGC CTG AAC GCT GTG TAT TAC TGT GCG AGA GAT CGG TCG AGC

S S W Y Y Y G M D V W G Q G AGC AGC TGG TAC TAC TAC GGT ATG GAC GTC TGG GGC CAA GGG CDR3 - IMGT

PSHFRGRD CCTCTCACTTTCGGGGGAGGGAC



Translation of CB2i-E7 kappa Chain: FIG. 60

 	T ACT	Q CAG	ACT	T ACT	IMGT 110 C TGC
		ŀ	٧.		E E
į	I ATC	CAG	65	T TTC	3 - K AAG
į	20 T ACC	Y		G D GAT	CDR3
į	V GTC	TGG		M 85 T ACA	Y
!	r Aga	40 A GCC		H GGG	A A A G
 	D GAC	 L TTA	IMGT _	- S TCT	105 Q CAA 2
	g GGA	:	- IM 60	m :	C TIGIT
	15 V GTA		CDR2	K	Y
E	S TCT		n S T	ъ 80 GGA	Y TAT
ტ	GC A	35	A GCA	S AGT	TACT
×	S TCT	IMGT _	A GCT	9 99	100 A GCA 7
н	L	¥i :	-	N AAT	V GT'T
1	10 S TCC	CDR1 Y TAT	I ATC	F	D GAT
Н	s TCC	D NA AAT	r r		E
pc;	PCCA	30 S AGC	f L J	STOT	P
[24	S TCT	IATT	G K AAG		95 Q CAA
!	O CAG	ນ ນ	M 50 P CCT	P CCA	LCTG
 	5 T ACC	OCAG	I V GTT	V GTC	S
	M ATG	S SAGT	- K AAA		S
 	CAG	25 A GCG	2 G G G		I
. !	IATC	R CGG	R P P CCA	l l	ľ
! ! V	1 D GAC	D TIGC	F 45 K K	1	L



Translation Of MSI 19-E5 Light Chain

!		z	AAC
!	_	н	
	20	H	ACC ATC
!		4	ပ္ပပ္ပ
! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! ! !		ద	AGG
		闰	GAG
	10	ტ	CTG GGC
	1	ы	CTG
E→		ഗ	TCT
ტ		>	GTG
Σ		A V	
H	_	ы	TCC CTG GCA
•	10	ഗ	IGG
		Ω	GAC
ĸ		Сť	CCA
ĬΉ		ທ	\mathbf{ICT}
1 1 1		œ	ACC CAG
	Ŋ	Ę÷	ACC
		Σ	TG
		Ø	gcg
1		н	GAC ATC GCG A
>	н	Ω	GAC

		Ø	:AG	:			E	ACC	:		H	ACT		н	110	F	Į.
:		O4		V		65		•	· E+			TTC 1		CDR3		S E	
		≯						:	ტ			GAT		ບ		≯ £	
1		Z						:	Σ	8	H	ACA				> E	IAI
1 1 1	40	æ	GCT					:	н		U	999				αį	\$
		ы	TTA		IMGT			:	1		හ	TCT			105	o (CAG
		×	TAC		,	09		:	m			:	^		•	ย	
		z	AAC		CDR2			:	않			:	į			≯ f	
		z					ຜ		ſτι	80		999	1			> 1	
	35	35 N AAT				ø	GCA	,			AGC			0	> [GIT	
IMGT		z			^		3		-		ტ	ggc	- I		10	4	
i i		ഗ	TCC	^ !		L L	55	×	TAC				AGT	!			> [
CDR1		ຜ	AGC	1			н	ALL			ĵz,	TIC				A	GAT
Ü		Ēι	TTC	i			ы	CIC	1	75	ద	CGA	1			1	GA.
	30	ы	TTA	H			ы	CTA			Ω	GAC	1			4	
		>	GTT	ტ			×	AAG	1			:			95	a	S S
		ഗ	AGT	Σ		20	Д	CCT				CCT				H	
		ద	CGG	н				CCT				GTC	1			ഗ	
<u>^</u>	•		AGC	•			O	CAG	1	70	ტ	999	!			ທ	
	25	ഗ	TCC	7			O	GGA			Ŋ	TCC	1			н	ATC
				æ			Д	CCA GGA CAG	1		H	GAA	1		90	[4	
		บ	TGC	ដែ		45	X	AAA	1		α.	CGG	1			ч	CIC

MGT

P I T F G CCA ATC ACC TTC GGC



Translation of 04 kappa chain 2:

FIG. 62

	T ACC	O CAG		Y TAC	i !	T ACT	IMGT 110 T T ACT
 	I ATC	40 Q CAA	V	:	E	F TTC	- IM T ACT
!	20 S AGC	 4 Y TAT		:	G	DGAT	CDR3
	V GTC	W Trgg		:	×	85 T ACG (CAT
	R AGG (A GCC	09	:	н	2 9 9	CAA (
	D GAC 7	 V GTA (IMGT .	:	ı	S TOT	105 Q CAG C
	G GGA G	1 :	Į. H	:	м	:	
	15 V GTA G	35	CDR2	:	ex	:	Y TAC T
ا [+	S TCA G		υ 	S TCC .	ſτ ₄	80 G GGA .	Y TAT T
			55		_		1
ტ	T ACT			A GCA	ļ	S AGT	V GTT
Ħ	S TCC	IMGT		S TCG		ა ემე	100 A GCA
н	M ATG	30 H	, , !	Y TAC		Ţ ACT	L CTG
1	10 F TTC	DR1 A GCT	1	I ATT		F	D
Н	K AAA	C T		L CTG		75 R CGC	E GAA
rc;	H	S AGT	F C	L	1	D GAT	A GCT
ſτι	S TCT	V GTG	ტ	K AAA	 	:	95 Q CAG
!	OCAG		×	PCCT	1	P	> ₽
1	5 T ACG C	25 Q D CAG GAT	н	S TCT (i !	V GTC C	S AGT G
į	M ATG 7	S AGT (O CAA		70 G GGA (S AGC A
	V GTA	A 900 A	45	GGA C		T ACT G	ATC &
	I ATC G	K AAG G	. 7	P CCA G	1	Y TAC A	90 T ACC A
· · · · · · · · · · · · · · · · · · ·	1 D GAC A	C TGC A	ተ <i>ሊ</i> ሊ	AAA Q	1 1	R CGG II	F F TTC A

P L T F G A G CCG CTC ACG TTC GGT GCT GGG



FIG. 63A

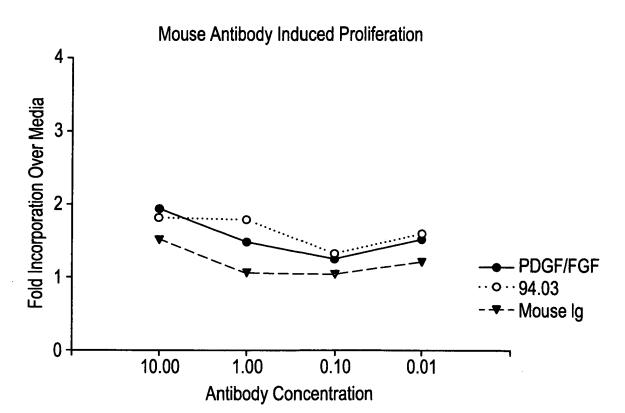


FIG. 63B

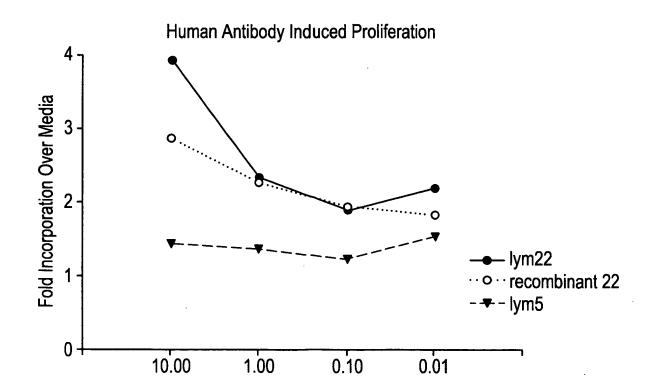
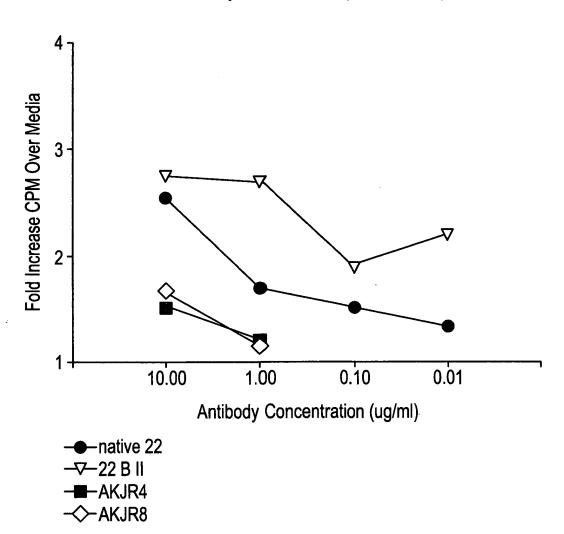




FIG. 64

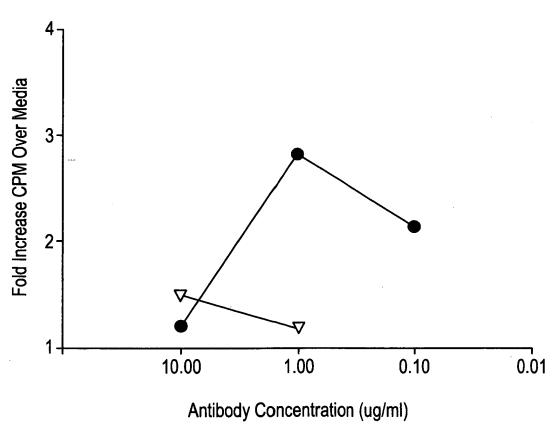
Human Antibody Induced 3H Thymidine Incorporation



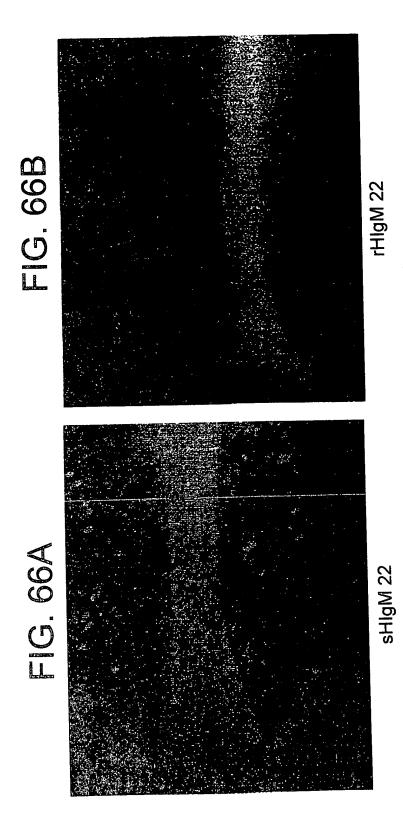




Mouse Antibody Induced 3H Thymidine Incorportion



— 09 — SHL Ig





TRANSLATION OF OI KAPPA CHAIN FIG. 68

	N AAT	i 回 f	5 GAG		TACT	!	TACT		IMGT 110 E Y AA TAC
	I ATT	0		65	•	E	F		- IN E GAA
	20 T ACT	→ E	IAI		:	ڻ	D GAT		CDR3 N AAT
	I ATT) 	ງ ງ		:	Σ	85 T ACA		H CAT
	T ACC	40 A)) 5		:	н	G GGT		CAG
	E GAA	, 1 E	¥ -	IMGT _	•	1	s TCT		105 Q CAA
;	GGA		•	- IM 60	•	m	•	/	TgT
	15 P CCT		•	CDR2	•	ፚ	•		Y
E	S TCT		•	0	s Icc	ſщ	80 GGA		Y TAT
ტ	A GCA	35	•		G GGA		s AGT	:	MATG
Σ	A GCT	IMGT	:		s TCT		ဗ ဗဗ		100 A GCA
н	L	1	: ^	55	Y TAC		s AGT		F
1	10 Y TAT	CDR1	181		I ATC		F	;	D GAT
, , ,	s TCT	× ×	§		LCIT		75 R AGG		E GAA
· K	P CCA	30	י ב אפר		L		S		P
, E 4	S TCT	H	1 14 b		K AAG		:	•	95 E GAG
-	Q CAG	ω <u>(</u>) 9 ₩ W	50	N AAT		P CCA		L CIG
	5 T ACC	× 5			TACT		I ATT		s AGC
	I ATA	, o £			K AAA		70 G GGA		SAGT
!	Q CAG	25 A			ი მვმ		S TCT		I
!	V GTC	α (PCCT		Q CAA		90 T ACC
	1 D GAT	ပြ			K AAA	! ! !	r TTG		CHC
									**

P Y T F G G G T K L E I K R CCG TAC ACG TTC GGA GGG GGG ACC AAG CTG GAA ATA AAA CGG

P Y T F G G G T K L E I K R CCG TAC ACG TAC AC



FIG. 69

TRANSLATION OF HNK-1 KAPPA CHAIN

	T ACT	. CAG	-	S AGT	.	S TCT	IMGT 110 S E
	L	O CAG	٠ ر	3 :	E	Y TAT	- IM S AGT
	20 S AGT	CIT		:	ڻ	D GAT	CDR3 A GCT
į	V GTC	TGG		:	Σ	85 S TCA	Y TAT
	R AGA	40 N AAC		•	Н	9 9	CAA
	e gaa	- TTA	IMGT	:	1	s TCT	105 L CTA
i ! !	G GGA	:	. 1 6	3 :	m	: '	, o Tet
1	15 L CTG	:	CDR2	:	ፎ		Y
H	S TCT	3		S TCC	Ĺτι	80 R AGG	Y TAT
ڻ	A GCC	35		TACA	1	s AGT	D
Z	S TCT	IMGT		A GCC		ე ე	100 V GTA
н	L TTA	1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Y TAC		s AGT	TTT
1	10 S TCC	CDR1 S AGC		I ATC	1	FTC	D
-	S TCC	o s AGT	i !	L CTG		75 R AGG	E
DZ.	PCCA	30 G GGT	H	പ്പു വ		K AAA	s TOH
נבי	S TCT	IATT	ഗ	K AAA	i ! !	:	95 E GAG
	o CAG	D	Σ u	I ATT		9 CCC	CIT
	5 T ACC	CAG	н	TACT		~밑	S AGC
	M ATG	> 5 S AGT	1	G GGA	į	70 G GGT	s AGC
į	O CAG	25 A GCA P	2	D GAT		s TCT	I ATC
1	I ATC	R CGG	pc.	PCCA		D GAT	90 H ACC
·>	1 D GAC	CTGT	[म ८ ए	GAA	1	L TTA	r CTC



TRANSLATION OF A2B5 KAPPA CHAIN

G T GTC ACC ATA TCC W Y Q Q TGG TAC CAG CAG 65 N AAC M G T 85 T S Y S ACC TCT TAC TCT CDR3 - IMGT TAT CAT AGT TAC	·
T T T TAC CAT TAC CAT TAC CAT ACC AT ACC AT ACC AT ACC AT ACC AT ACC ACC	·
CDR. CDR. CDR.	·
TAC TAC GGG GGG GGG CAG CAG	
H (1) (1) (1)	
$\begin{matrix} \cdot & \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot &$	
CDR2 CDR2	
S TCT S TCT S TCT Y TAT TAT	R CGG
A GCA GCA ACA ACT ACT ACT ACT ACT	K AAA
S G TCT IMGT T GGC T GGC T GGC T GGC	L CTG
M ATG - IM - IM TAT TAT AGT AGT AGT	e Gag
TTC TTC D GAT	120 L CTG
A GAA	K AAG
P CCA S S AGT T - T - A GCT A	TACC
S TCT V GTA AAA AAA AAA AAA AAAA AAAA AAAA A	ტ მმმ
S S AGT M M M M M M M M M M M M M M M M M M M	A GCT
S S TCA D I I I I I I I I I I I I I I I I I I	115 G GGT
CTC L CTC L S S AGC GGA GGGA S AGC GGA GGGA S S AGC GGA GGGA GGGA GGGA GGGA GGGA S S S AGC GGA GGGA GGGA GGGA GGGA GGGA GGGA G	FTTC
V GTT CGGA GGGA GGGA GGGA GGGA GGGA GGGA	TACG
S AGT CCA GCT ACA ACA	CFC
CCAA 45 F 45 K AAG L CTG	P



LYM 46 Heavy Chain Sequence:

			F	R 1										
E	v	Q	L	V	E	S	G	G	G	L	V	Q	P	G
GAG	GTG	CAG	CTG	GTG	GAG	TCT	GGG	GGA	GGC	TTG	GTC	CAG	CCT	GGG
												CDI	R1	
G	S	L	R	L	S	С	A	A	S	G	F	T	F	S
GGG	TCC	CTG	AGA	CTC	TCC	TGT	GCA	GCC	TCT	GGA	TTC	ACC	TTT	AGT
							FR 2	2						
S	Y	W	M	T	W	V	_FR 2 R	Q	A	P	G	K	G	L
							CGC							
E W V A N I K K D														
E	W	٧	A	N	I	K	K	D	G	S	E	K	s	Y
GAG	TGG	GTG	GCC	AAC	ATA	AAG	AAA	GAT	GGA	AGT	GAG	AAA	TCC	TAT
	•	2D 2												
77		FR3	77	77			F	m		0	- To		37	
GIG	GAC	TCT	GIG	AAG	666	CGA	TTC	ACC	ACC	TCC	AGA	GAC	AAC	GCC
			····											
							M							D
AAG	AAC	TCA	CTG	TAT	CTG	CAA	ATG	AAC	AGC	CTG	AGA	GCC	GAG	GAC
					·		•		CDI	R3				
							R							
ACC	COM	CMC	mam	ሞልሮ	mcm	CCC	AGA	CCC	AAT	TGT	GGT	CCT	GAC	TGC
ACG.	GCT	GIG	IMI	INC	161	GCG								
							L							
<u> </u>	L	P	W	Y	F	D		W	G	R	G	T	L	v
Y TAT	L	P CCA	W TGG	Y	F	D	L	W	G	R	G	T	L	v

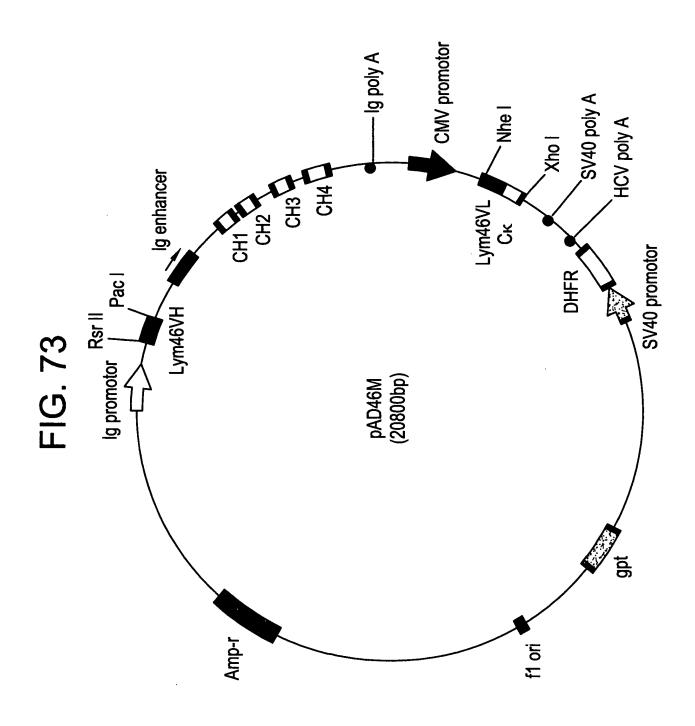
125 130 15 CGA ACT GTG GCT GCA TCT GTG TTC

P Q A F G Q G T K V E I K CT CAG GCG TTC GGC CAA GGG ACC AAG GTG GAA ATC AAA

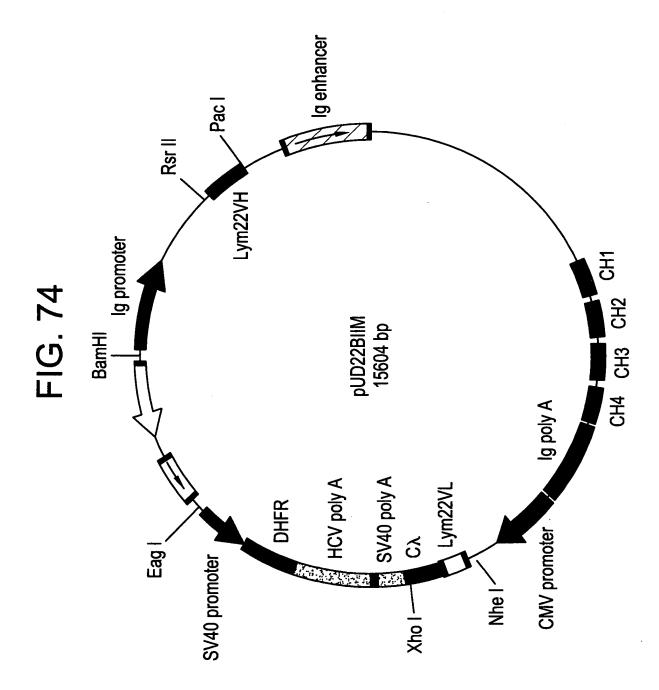


ATENT & TO									
	!	N AAC		O CAG		ACC		T. ACT	IMGT 110 I T IT ACT
	!	H ATC		O S			H	FTTC	- IX N AAT
		20 ACC	!	r Tac		•	ტ	D GAT	CDR3
		န		e e e		:	×	85 7 7 7 7	× TAT
		a Agg		40 A GCT		:	н	ი მ	0.5
		e Gag	<u> </u>	TTA	IMGT	:	1	STCT	105 CAG
		စ ၁		TAC	Ä		ო	•	v national state of the state o
	1	15 L CTG		AAC	CDR2	•	æ	•	IAC IAC
	H	s TCT		AAG	Ū	rci TCT	드	80 0 0 0 0	HAT TAT
72	ტ	V GTG		35 N AAT		gCA B		8 A GC	SFT.
FIG. 72	×	₽ GCT	IMGT	AAC AAC		¥ £	i	စ ဗွ	100 GC A
	н	CIG	Ä	န ၁	^	55 Y TAC	į	S AGT	> P PHG
CHAIN SEQUENCE	1	10 10 10 10	CDR1	8 C C		IATT	i !	H H C	G.A.
nŏas	+	D GAC	J	TAC	į	CIC		75 R CGA	GAA
Z H	ĸ	۳ کی کا		30 L TTA	· H	CIA	i 	D GAC	₽
CHA	Ēų	a TCT		V GTT	v	AAA	1	•	95 CAG
	 	CAC		Q S CAG AGT	Σ	50 P	i ! !	CCT	CTG
LIG	1	5 ACC		CAC	н	CCT	į	orc Grc	A GC
PPA		ATG	^	s Agc	1	CAG CAG	į	70 a 666	S AGC
KAI		v GTG		25 S TCC	N	ა წ	; 	s TCC	H ATC
YM 46 KAPPA LIGHT	! !	ATC	1	K AAG	æ	GC P		E GAA	90 FCC
MX	ļ.	D	!	ပ <u>ပ</u> ိ	-	ល់អម្ម	!	ቚ	크 된 기

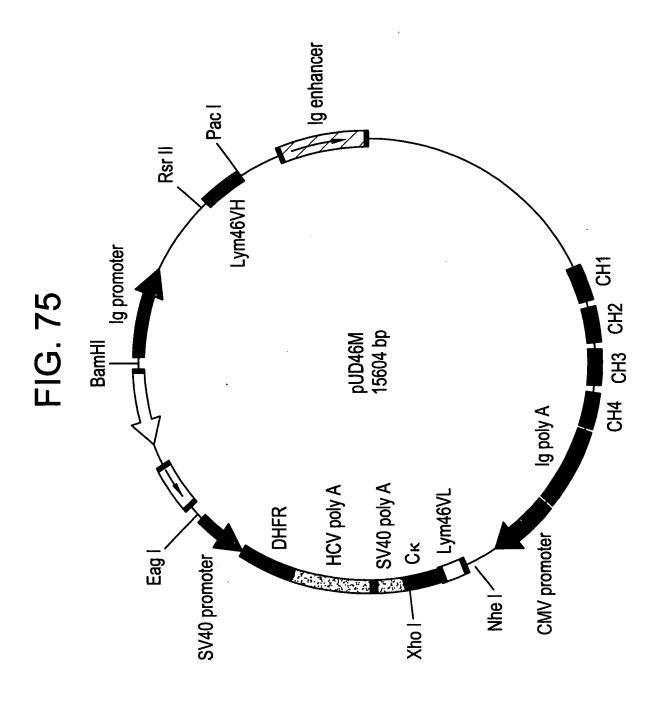




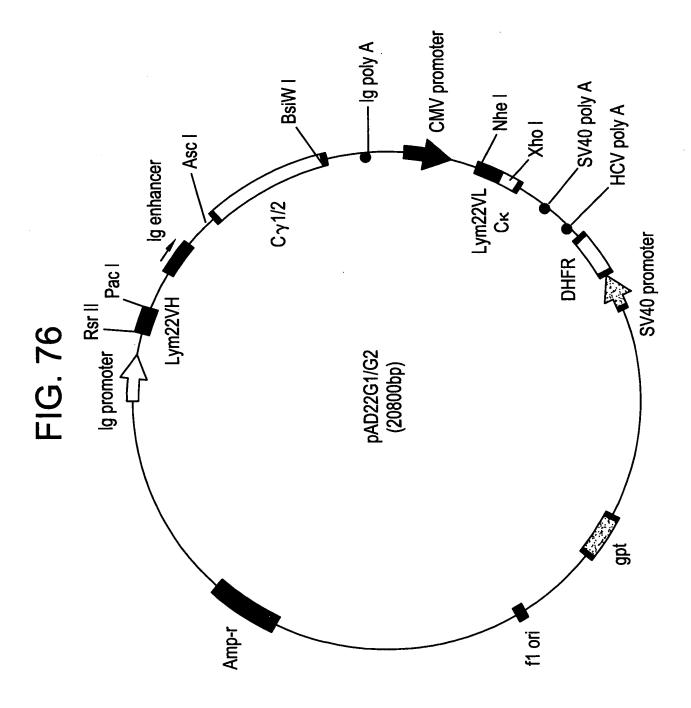




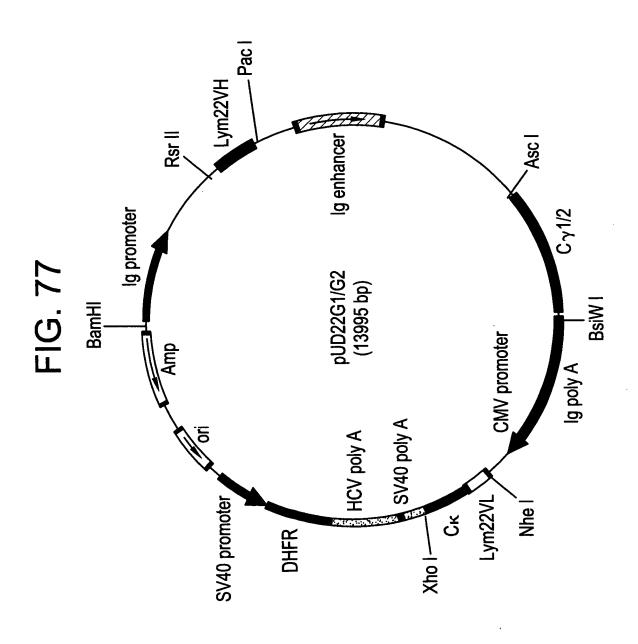




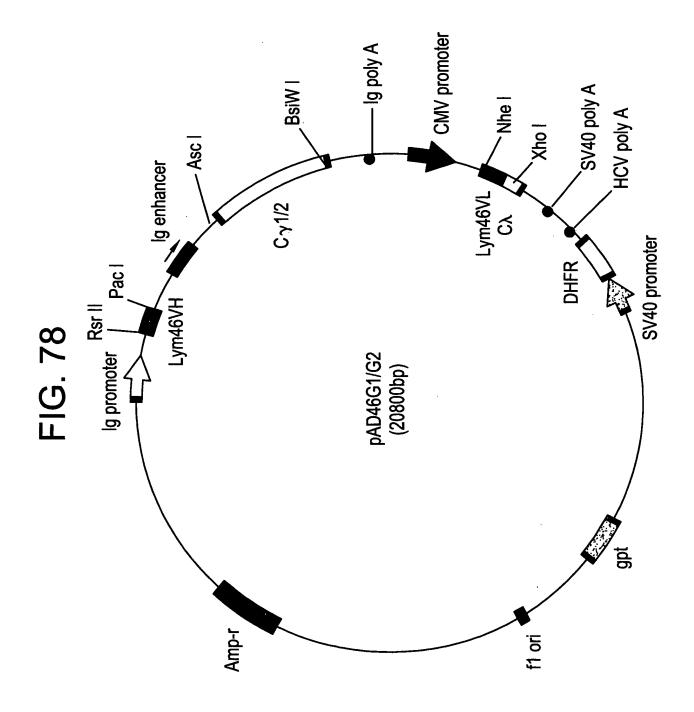














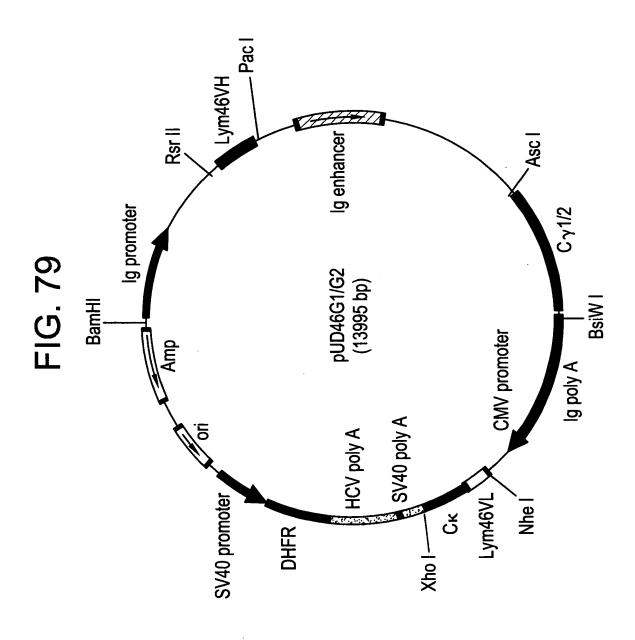




FIG. 80A

TMEV Infected SJL Mice
Treated at 21 Days Post Infection

Demyelination

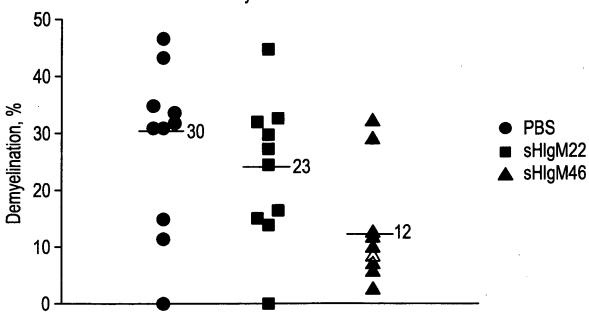


FIG. 80B

TMEV Infected SJL Mice
Treated at 21 Days Post Infection

Inflammation

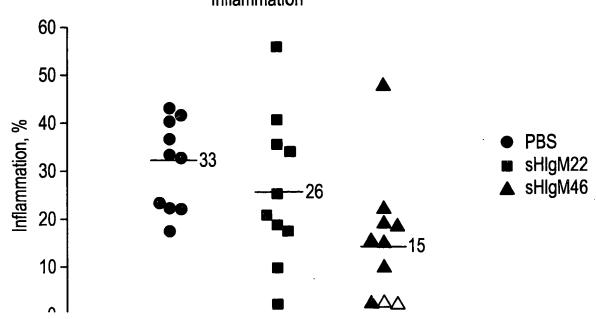
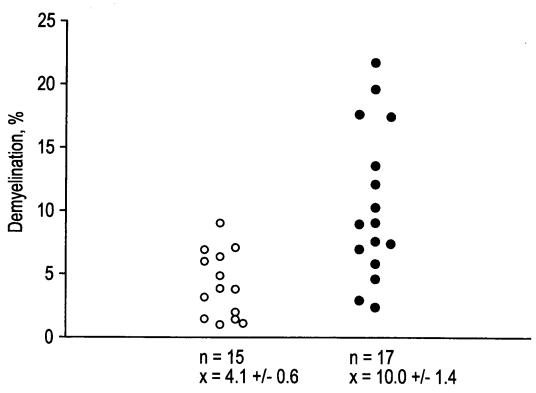




FIG. 81

Chronically TMEV Infected SJL Mice Treated with sHIgM46 or sHIgM22



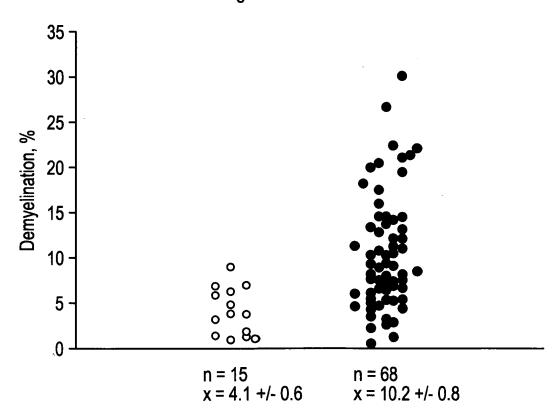
Groups are different by ANOVA, P = 0.001

- o sHlgM46
- sHlgM22



FIG. 82

Chronically TMEV Infected SJL Mice Treated sHIgM46 vs All Other Antibodies



Groups are different by one way ANOVA, P = < 0.001

- o sHlgM46
- other mAbs



FIG. 83

45Ca Internalization in Undif CG4 Cells

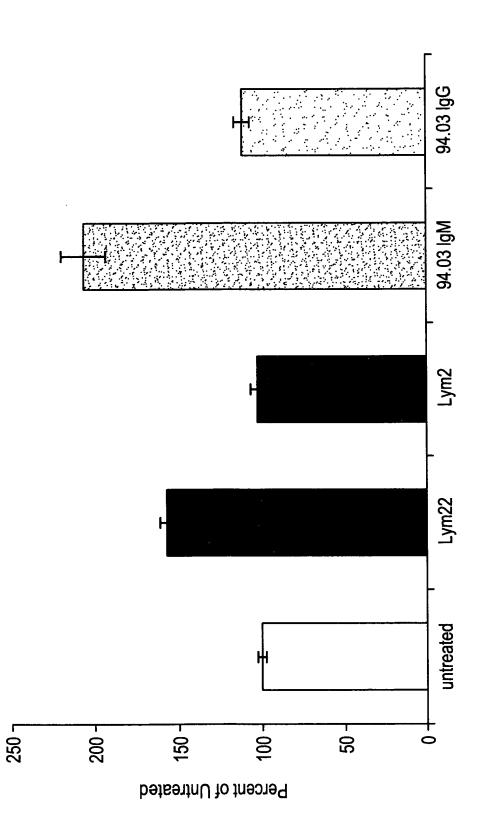
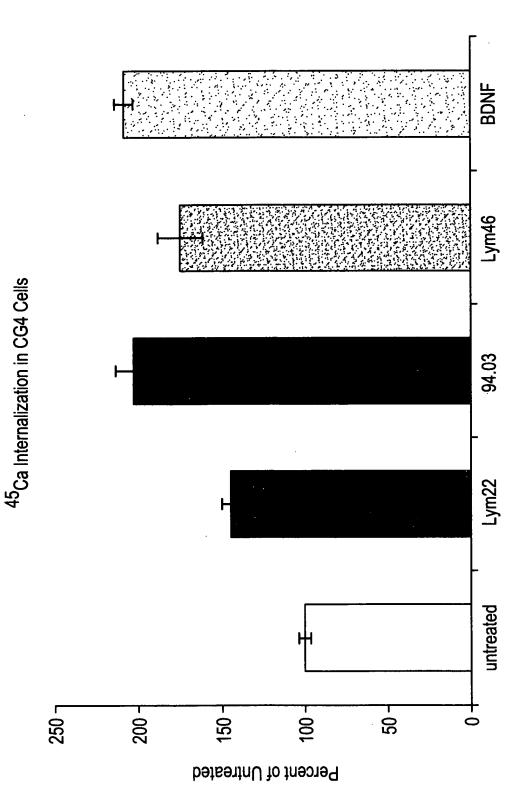




FIG. 84



SP 2.5 ZOR &

FIG. 85

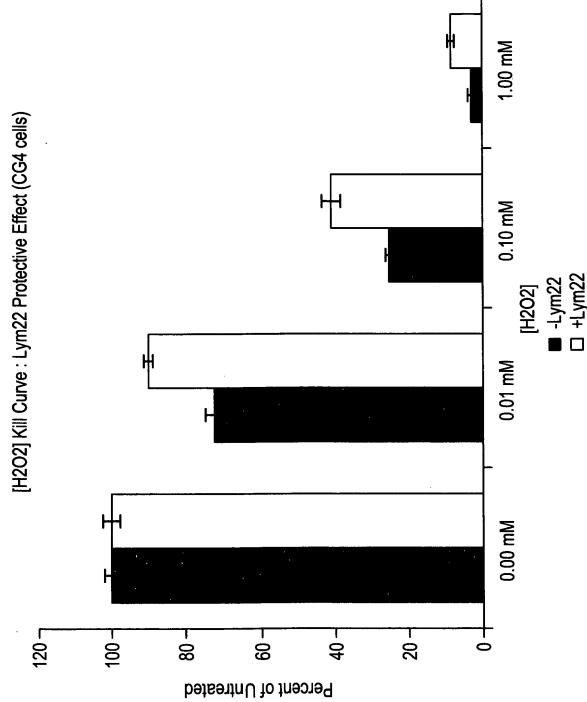




FIG. 86A

MTT Assay: H₂O₂-induced cell death

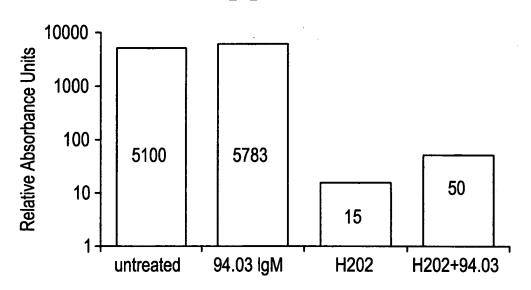


FIG. 86B

Cell Number: H₂O₂-induced cell death

